



City and Port of Cardiff

PUBLIC HEALTH DEPARTMENT

ANNUAL REPORT

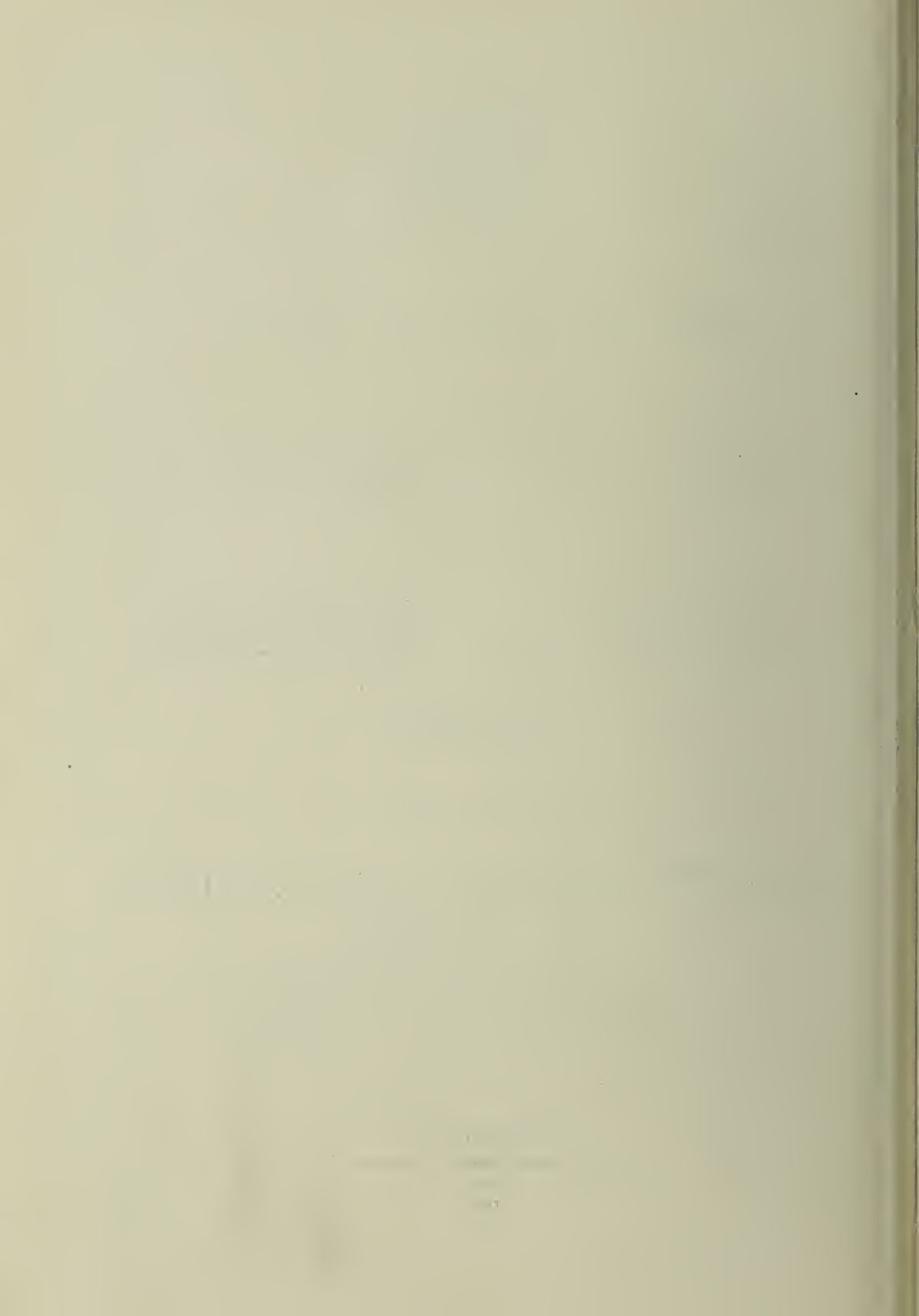
1934

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*Medical Officer of Health,
School Medical Officer,
Medical Officer for Mental Deficiency
and
Medical Officer for Public Assistance.*

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COMMITTEES.

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Chairman:

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Deputy Chairman:

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Alderman C. W. MELHUISE, J.P.*†‡	„ H. E. WHITE†‡
Councillor O. C. PURNELL, J.P.*	„ A. J. BEECHER†‡
„ T. J. MULLINS†‡	„ F. CHAPMAN*
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„ R. G. ROBINSON†‡	„ G. E. B. FREWER.
Councillor W. T. BANBURY†‡	

Hospitals Sub-Committee.

The Health Committee with the following co-opted members :

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Dr. J. D. WILLIAMS.

Sir EWEN J. MACLEAN, J.P., M.D.

Lord Pontypridd Hospital Visiting Sub-Committee.

Members of the Health Committee whose names are marked thus * with the following co-opted members :

Mr. CHARLES THOMPSON, J.P.

Mr. HERBERT M. THOMPSON, J.P.

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Mrs. E. THOMAS.

Mrs. M. S. STEWART, J.P.

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„ O. C. PURNELL, J.P.	„ G. E. B. FREWER.
„ W. G. HOWELL.	„ T. G. LEYSHON.
„ C. H. MCALE.	„ T. H. LOVITT.
„ J. HELLYER.	Miss MABEL HOWELL.
Miss M. SANDERS.	

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 Councillor JAMES GRIFFITHS, J.P.
 „ A. J. BEECHER.
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 Alderman G. FRED EVANS.
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 „ R. G. ROBINSON.

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„ A. POWELL.

„ W. T. BANBURY.

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Mrs. A. KERRIGAN.

Mrs. C. CANTILLON.

Mrs. A. A. EVANS.

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„ C. H. McCALE.

„ JAMES GRIFFITHS, J.P.

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„ C. G. MORELAND.

„ F. CHAPMAN.

„ A. J. MARTIN.

„ A. POWELL.

„ T. H. LOVITT.

Councillor J. H. MORGAN.

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Mrs. C. CANTILLON.

Mrs. A. A. EVANS.

Mr. J. J. AMES.

Mr. G. D. THOMAS.

Mr. G. H. SNOOK.

Mr. F. INGLETON.

Mr. E. J. SAWYER.

STAFF.

Medical Officer of Health, School Medical Officer, Medical Officer for
Mental Deficiency and Medical Officer for Public Assistance.

J. GREENWOOD WILSON, M.D. (Lond.), M.R.C.P. (Lond.), D.P.H.

Deputy Medical Officer of Health.

W. POWELL PHILLIPS, M.R.C.S., L.R.C.P., D.P.H.

Assistant Medical Officers :

HERBERT SHEASBY, M.B., Ch.B., D.P.H.

HELENA J. WEBSTER, B.Sc., M.B., B.Ch.,
D.P.H.

CECIL W. ANDERSON, M.B., Ch.B., D.P.H.

NANCY K. GIBBS, M.R.C.S., L.R.C.P., D.P.H.

HILDA A. COHEN, M.R.C.S., L.R.C.P., D.P.H.

T. ISLWYN EVANS, M.A., M.B., Ch.B., D.P.H.

JEAN W. SMELLIE, M.B., Ch.B., D.P.H.

Specialist Medical Officers (Part-time) :

Ophthalmic Surgeon : RUPERT J. PARRY, M.B., B.S. (Lond.)

Orthopaedic Surgeon : A. O. PARKER, M.D., C.M.

Dental Staff :

D. W. ELLIOT, L.D.S.

D. J. ANDREWS, L.D.S.

W. A. SUTHERLAND, L.D.S.

H. B. WILSON, L.D.S.

Four Clerk-Attendants.

Health Visiting, School and other Nursing Staff :

Supervisor : Mrs. L. HUNTLEY.

Thirteen Health Visitors (Including two part-time
Tuberculosis Nurses).

Two Tuberculosis Nurses (Whole-time).

One Venereal Diseases Nurse.

Nine School Nurses.

Two Orthopaedic Nurses.

Sanitary Staff (Urban) :

Chief Inspector : W. G. PYATT.

One Chief Assistant Inspector.

Fifteen Assistant Inspectors.

Sanitary Staff (Port) :

Chief Inspector : T. D. HILL.

One Chief Assistant Inspector.

Five Assistant Inspectors.

Veterinary Inspection and Meat Inspection (Abattoirs) Staff :

Veterinary Officer and Chief Inspector of Meat : JOHN H. M. HUGHES, M.R.C.V.S., D.V.S.M.

Three Assistant Inspectors of Meat.

Public Analyst :

STANLEY DIXON, M.Sc., F.I.C.
One Laboratory Assistant.

Mental Deficiency Staff :

Visiting Officer : Miss K. POWELL.
Occupation and Training Centre :
Supervisor : Mrs. A. DASCOMBE.
One Instructress and 1 Instructor.

Clerical Staff :

Chief Clerk : THOMAS CHANT.

Ten male Clerks and 6 female Clerks (General Public Health Service, etc.)
Two male Clerks and 8 female Clerks (School Medical Service).

Other Staff :

One Epidemic Officer.
One Infant Protection Visitor.
Two Vaccination Officers (1 part-time).

Hospitals :*Llandough Hospital :*

Medical Superintendent : DAVID G. MORGAN, M.R.C.S., L.R.C.P. (Also Medical Officer, City Lodge)
Deputy Medical Superintendent : D. A. WILLIAMS, B.Sc., M.R.C.S., L.R.C.P.
Senior Assistant Medical Officer : G. H. GARFIELD, B.Sc., M.B., B.Ch.
Matron : Miss C. L. JOHN (Also Superintendent Nurse, City Lodge)
Steward : H. T. ROFFEY (Also Master, City Lodge)
Dispenser : SELWYN DAVIES, Ph.C., M.P.S.
Almoner : Miss G. OLWEN WILLIAMS.
Five Junior Resident Medical Officers.

Visiting Consultant Staff :

Physician : Professor A. M. KENNEDY, M.D., F.R.C.P. (Lond.)
Surgeon : D. J. HARRIES, M.D., F.R.C.S. (Eng.)
Aural Surgeons : R. D. OWEN, F.R.C.S. (Ed.) ; A. A. PRICHARD, M.D., M.R.C.S., L.R.C.P.
Physician for Diseases of Children : A. G. WATKINS, M.D. (Lond.)
Gynaecologist : Professor G. I. STRACHAN, M.D., F.R.C.P. (Lond.), F.R.C.S. (Eng.)
Anaesthetist : H. G. GREAVES, M.B., B.Ch.
Pathologist : Professor J. B. DUGUID, M.D.
Bacteriologist : W. PARRY MORGAN, M.D.
Radiologist : T. GARFIELD EVANS, M.D. (Lond.)
Dentist : W. E. HALLINAN, L.D.S.

Isolation Hospital :

Medical Superintendent : G. EMRYS HARRIES, M.B., B.S., D.P.H.
Matron : Miss E. P. CHUBB.
One Junior Resident Medical Officer.

Lord Pontypridd Hospital :

Matron : Miss M. W. FOX.

Public Vaccinators (Part-time) :

J. J. BUIST, M.B. (Lond.)

C. C. RALPH DOWNING, M.D.

E. MERVYN JONES, M.R.C.S., L.R.C.P.,
D.P.H.

A. DOWER, M.D.

H. C. C. JOYCE, M.R.C.S., L.R.C.P.

J. F. DOVER, M.B., B.S.

Public Assistance Medical Officers :

City Lodge :

Medical Officer : DAVID G. MORGAN, M.R.C.S., L.R.C.P. (Also Medical Superintendent,
Llandough Hospital)

Deputy Medical Officer : JOHN JONES, M.B., B.Ch.

Two Resident Assistant Medical Officers.

Ely Lodge (P.A. Mental Deficiency Institution) :

Medical Officer and Master : J. ROWLAND PAYNE, M.R.C.S., L.R.C.P.

District Medical Officers:

H. D. E. WHITMAN, M.R.C.S., L.R.C.P.
(Whole-time)

E. MERVYN JONES, M.R.C.S., L.R.C.P., D.P.H.
(Whole-time)

A. DOWER, M.D. (Part-time)

D. W. GIRVAN, M.B., C.M. (Part-time)

E. LLEWELLYN, M.B., Ch.B. (Part-time)

A. H. MITCHELL, M.B., Ch.B., (Part-time)

J. F. DOVER, M.B., B.S. (Part-time)

H. C. C. JOYCE, M.R.C.S., L.R.C.P.
(Part-time)

PREFACE.

Introduction.—This year's Annual Report is noteworthy for a serious attempt to lay once and for all the "bogey" of Cardiff's relatively high death-rate from tuberculosis, which, like the Loch Ness monster, keeps cropping up in a fresh place. Fortunately, certain data have been noted for a number of years upon the case records of tuberculous cases and these, at the cost of considerable labour, have now been worked up into a statistical study of the problem (see pages 51 to 58). To grasp all its implications, this section of the Report must be read through from beginning to end and, therefore, it is not proposed to summarise it. But one conclusion may be drawn, which, though negative, is of importance. The persistence of a relatively high death-rate from tuberculosis in Cardiff is related in part to factors beyond the control of either the Local Health Authority or the Welsh National Memorial Association. No one would deny that better housing, improved nutrition, health education—all the various ways and means of improving the health of the individual and his environment—play an indispensable part in the reduction of tuberculosis mortality, and no one could say that these methods have been applied with any less diligence and enthusiasm in Cardiff than elsewhere. To assess the relative importance of any one of the "ways to health" in stamping out tuberculosis has always been a matter of guesswork. It is generally agreed, however, that good housing conditions are a prerequisite to any successful attack upon the tuberculosis problem. Yet Cardiff has been in the fortunate position of being able to contribute to the "national drive" of "slum clearance" one of the smallest programmes in the country for a city of its size. Cardiff's "weak spot" in housing is not so much the *quality* of its houses as the overcrowding (by multiple tenancy) of the houses that it has. This indeed must have contributed to the maintenance of a high tuberculosis mortality, but it is anticipated that the application to Cardiff of the provisions of the Housing Act, 1935, will bring that contribution to an end in the near future. Even so, the overcrowding problem in Cardiff has not been any greater than that which exists in many other cities that have had for years a lower mortality from tuberculosis. But Cardiff has a relatively large seafaring population, and the table (page 51) showing the occupational incidence of tuberculosis indicates clearly that the disease takes a far greater toll from seafarers than from those following other vocations. In years gone by one could have said that this was the price paid by Cardiff for her prosperity—an unenviable reputation for tuberculosis based largely upon the high incidence of that disease amongst those engaged in her principal industry. Today the prosperity has gone, but the price has still to be paid. Worse than that, lack of prosperity is operating against the reduction of the price. Bad "housing conditions" predispose to tuberculosis afloat no less than ashore. Local authorities can remedy bad housing conditions ashore. They cannot control "housing conditions" afloat. No one could expect to obtain for the seafarer the same "housing" amenities as for the "land-lubber" living in a parlour-type Council house, but there is a minimum standard of accommodation "fit for human habitation" which could be attained afloat and is not being attained. The survey of the hygiene of crews' spaces, which appears on pages 129 and 130, suggests a progressive deterioration of late in "housing conditions" afloat. For years the Association of Port Sanitary Authorities has been urging numerous improvements in these. The reply is that at the present time the shipping industry cannot afford them. Beyond these obvious remedies we step again into a realm that is beyond administrative control—"the progress of civilization." In days of sail the seafarer could claim with some truth that he followed an open-air occupation. In modern steamships it is probable that the sailor, spending most of his time below deck, gets almost as much "fresh air" as a coal-miner. Even in the Royal Navy, where the standard of hygiene is amazingly high, the incidence of and mortality from tuberculosis are higher than are found amongst men of comparable age-groups working ashore.*

*There are, of course, certain occupations ashore, such as stone-masonry, which are notorious for their effect in predisposing to tuberculosis.

An attempt has been made to show that the reduction of tuberculous infection is dependent upon two groups of factors—one beyond control and the other subject to control provided the will be found to make the way. One avenue of infection that *could* be barred by administrative control is the milk supply. In Cardiff, by means of an elaborate system of surveillance, sampling and inspection, immense efforts are made to prevent the consumption of tuberculous milk. Yet, during the ten years 1924-1933, 4·6 per cent. of all milk samples examined for evidence of tuberculous infection yielded a positive result; and it must be remembered that each sample found "positive" may indicate tuberculous infection of a considerable bulk supply of milk. Further, although the system of sampling is highly efficient, it is not possible to sample every drop of milk that comes into the city. Sometimes the positive result takes several weeks to obtain and during all that time, as the law now stands, the continued delivery of the milk supply to consumers cannot be prevented. Those consumers, in all probability lacking health education, or being fastidious about the taste of heated milk, or having distorted mental processes which prevent their believing in germs, may fail to boil the milk before consumption. Members of the households receiving the suspected milk may be children who are particularly susceptible to tuberculous infection and may fall victims of the disease as a result. If they do not die of it, they may have years of suffering and incapacity, and may grow up crippled for life.

Theoretically, it might be possible to breed a national herd of tubercle-free cattle—but not in a life-time. And, meanwhile, what of the thousands of children who will be infected year by year from tuberculous milk? How much more simple to insist on efficient pasteurisation by modern pasteurising plants of all milk before consumption! Manchester authorities tried to do that, but the citizens were not enlightened enough to follow their rulers' lead. There is a body of honest opinion which strictly maintains, despite a wealth of scientific evidence to the contrary, that pasteurisation *must* interfere with the nutritive qualities of the milk. In this dilemma we may perhaps hope for salvation from a recently invented instrument called for convenience the "Sonizer."* This is an ingenious application of the experience that high-pitched noises "set the teeth on edge." It has been found that noises of sufficiently high pitch do more than that—they kill *germs*. Experiments with the new instrument have been made upon heavily infected raw market milk (containing 10,000,000 organisms per c.c.). Reductions in the number of organisms per c.c. of fluid ranged between 95 and 99 per cent. No appreciable rise of temperature during the treatment was observed. If it can be proved that the high vibration has no ill-effect upon the nutritive qualities of milk, there is promise of the harmless disinfection of milk on a commercial scale by a method that offers many obvious advantages over treatment of milk by the most up-to-date pasteurising plant.

In addition to the statistical study of tuberculosis (pages 51 to 58) certain other contributions of the Report are worthy of special attention:—

- (1) An attempt to understand why the infant mortality rate for Cardiff remains persistently high—pages 12 to 16.
- (2) An account of the Hortvet freezing-point test of milk adulteration—pages 88 to 94.
- (3) An analysis of data regarding rats and rat-fleas obtained over a period of years from the Port and City of Cardiff, by Colin Matheson, M.A., B.Sc., Keeper of Zoology, National Museum of Wales—pages 121 to 129.
- (4) A survey of the hygiene of crews' spaces—pages 129 and 130.
- (5) A survey of the hygiene of schools—pages 135 and 136.

Vital Statistics.—A tendency to stabilisation is seen in the birth-rate, which has risen from 15·5 per 1,000 of the population in 1933 to 15·8 in 1934, as compared with 15·7 in 1932, 16·8 in 1931, 16·9 in 1930 and an average of 18·1 for the ten-year period 1924-33. Nevertheless, the population, according to the Registrar-General's mid-year estimate, has again fallen—from 223,589 at the 1931 Census to 222,600 in 1932, 222,000 in 1933 and 221,050 in 1934. The excess of births over deaths (429 in 1933 and 771 in 1934), coupled with the increase in the estimated number of inhabited houses (from

*Chambers, Leslie A. and Gaines, Newton; *Journal of Cellular and Comparative Physiology*, Vol. 1, No. 3, June, 1932.

Gaines, Newton; *Physics*, Vol. 3, No. 5, Nov., 1932.

44,500 in 1933 to 45,000 in 1934), are but two of many indications in local records that would have led one to expect an increase rather than a decrease in the population. Numerous factors, however, such as migration, make it difficult to arrive at an exact computation of the population without a census, and there is much to be said in favour of making the national census quinquennial instead of decennial.

The death-rate shows a welcome fall to 12·3 per 1,000 of the population, as compared with 13·5 in 1933 and 12·5 in 1932. The rise to 13·5 in 1933 was exceptional and attributable to an influenza epidemic in the early part of that year.

In the past, when death-rates of different towns have been compared with each other, comparison has not been strictly fair to all of them, because it has ignored certain local differences of sex and age groups in the population which have an effect upon the death-rate. For example, in one town you might have an undue proportion of aged persons who are nearing the end of their "allotted span"; in another an exceptionally large number of men engaged in hazardous occupations. For each of the 121 Great Towns, the Registrar-General has now calculated a "comparability factor" by which it is necessary to multiply each of those town's death-rates in order to make due allowance for differences in sex and age groups when comparing their death-rates. On page 5 a table appears in which the death-rate for Cardiff in 1934 is compared with the average death-rate for the previous 10 years, the death-rate for England and Wales in 1934 and the death-rate for the 121 Great Towns in 1934. In the preparation of this table the new "comparability factor" was used. Although the necessity for using this "factor" is evident, it has the unfortunate effect of making the comparison more unfavourable to Cardiff than if it had not been used. By the old method of calculation, the death-rate for Cardiff in the 10 years 1923-32 was 12·2 per 1,000, compared with one for England and Wales in 1933 of 12·3 and with one for the Great Towns in 1933 of 12·2. But when the new "comparability factor" is applied, a death-rate for Cardiff in 1934 of 13·0 compares with one for the previous 10 years of 13·0 also, with one for England and Wales in 1934 of 11·8 and with one for the Great Towns in 1934 of 12·4. Thus, to the extent that death-rates are an index to health, the new and more exact method of comparison reveals that the health of Cardiff is less satisfactory than had been thought. From a study of the statistics over a number of years, it may be noticed that the number of "Great Towns" seems always to be increasing. Until comparatively recently there were 107 of these, in 1933 there were 118 and now there are 121. To a large extent this reflects the increasing urbanization of England and Wales.

Another modern tendency that is suggested by the statistics is the treatment of the sick in institutions rather than in their own homes. Thus, in Cardiff in 1934 the proportion of deaths occurring in public institutions and nursing homes was 39·9 per cent., as compared with 37·5 per cent. in 1933 and 38·6 per cent. in 1932. The existence of this tendency, which promises to increase in the future, confirms the wisdom of building Llandough Hospital. As a result, Cardiff is in a favourable position for hospital accommodation, the average number of hospital beds (for all purposes) available for Cardiff residents being 122 per 10,000, as compared with an estimated average of 94·7 per 10,000 for the whole of England and Wales.

A study of the table on page 6, which sets out the causes of death, shows that the principal killing diseases are cancer, pulmonary tuberculosis, heart and other circulatory diseases, pneumonia with bronchitis and other respiratory diseases and troubles at birth (congenital debility, premature birth, malformations, etc.). If the individual can survive death in the first year of life from the last-mentioned causes of death, or to a lesser extent from bronchitis and pneumonia, he or she must then "run the gauntlet" against death from pulmonary tuberculosis in the years 15-65 (and especially from 25-45), from cancer after the age of 45 years, from pneumonia and bronchitis from 45 years onwards and from heart and other circulatory diseases also from 45 years onwards. These five disease groups are some of the greater rocks upon which the good ship "preventive medicine" founders. Although in some instances "heart disease" is merely the label for "death from old age," there are many cases of heart failure that could be prevented, or at least postponed, by more knowledge and greater care, not only in childhood (as, for example, by rheumatism supervisory schemes), but also

through adolescence and the age-periods that follow. The extension of routine medical inspection to include adolescents and adults as well as school children, would in many instances postpone the onset of heart failure and discover many cases of cancer and pulmonary tuberculosis at stages when they are most susceptible of cure or amelioration.

Many "articles" in the "creed" of preventive medicine are involved in the prevention of the respiratory diseases (pulmonary tuberculosis, pneumonia and bronchitis), such as well-ventilated and decrowded houses free from sanitary defects, sound nutrition and hygienic clothing.

A large number of infantile deaths from congenital debility, prematurity, etc., are unavoidable in the present state of our knowledge. Until we know more about their causes, not much further reduction in infant mortality can be anticipated—even in the most health-conscious communities.

Deaths from Road Accidents.—The number of these in 1934 was higher than at any time since the records have been kept. From the analysis on page 8, it appears that the greatest risk is run by pedestrians, and then in decreasing order of magnitude by passengers, motor-cyclists, pedal cyclists and drivers.

Maternal Mortality.—The maternal mortality rate for Cardiff in 1934 was 7·70 per 1,000 live births, as compared with 4·94 in 1933 and 4·75 in the 10 years 1924-33. The rate for England and Wales in 1934 was 4·60 and for the 121 Great Towns 4·17. The rise in the maternal mortality rate in 1934 coincides with an increase in the number of notifications of puerperal fever for that year (from 39 to 54). As in previous years, each maternal death has been followed by a careful investigation, with the object of discovering the factors concerned in its causation and whether any of these was preventable. On pages 9 and 10 an analysis is given of the circumstances attending the pregnancy and confinement of the 20 cases that died during or after child-birth. The conclusion is drawn that the occurrence of a relatively large number of maternal deaths in 1934 may be regarded as fortuitous and exceptional.

Infant Mortality.—The death-rate for infants under one year was 74 per 1,000 live births—a reduction of 3 on the previous year's record. The infant mortality rates for England and Wales and for the 121 Great Towns in 1934 were 59 and 63 respectively. A comparison of the infant mortality rates in the municipal wards of the city shows that the highest rate (100) occurred in Central and the lowest (47) in Splott. Pages 12 to 16 of the report are devoted to a study of the problem of infant mortality in Cardiff and to an attempt to understand why the infant mortality rate for Cardiff has remained for a number of years so persistently high in comparison with the infant mortality rates for England and Wales.

Infectious Disease.—There was a welcome reduction in the incidence of scarlet fever, from 1,308 cases in 1933 to 905 cases in 1934. It is anticipated that there will be a further decline in the number of cases during the next few years. The disease was mild in type and there were only 5 deaths out of the 905 cases.

Diphtheria increased slightly in prevalence and in virulence. According to clinical observation, the increase in virulence appeared to be greater than is suggested by the small increase in case-mortality figures alone. At the Isolation Hospital it was deemed necessary to treat nearly all diphtheria cases admitted in the latter part of the year by very large doses of anti-diphtheritic serum administered intravenously. In previous years this method of administering anti-diphtheritic serum was not found to be necessary. The records of treatment at the Isolation Hospital for the year 1933 show that the case-mortality in diphtheria patients who received anti-diphtheritic serum on the fourth day was more than double the case-mortality in those who received it on the third day. In the 1934 records (see page 26) what may be termed the critical day, after which the administration of anti-diphtheritic serum became much less effective, was the fourth instead of the third, for the case-mortality in cases receiving serum on that day was much the same as in those receiving it on the third, whereas in those

receiving it on the fifth day the case-mortality was nearly *three times* the case-mortality of those receiving serum on the fourth day. From this comparison of the two years' records it is arguable that the intravenous method of administering serum adds a day's grace to the period beyond which the largest doses of anti-diphtheritic serum became of little avail. Both years' figures abundantly confirm the efficacy of anti-diphtheritic serum when administered *in the early stages of diphtheria* and demonstrate the importance of calling in a doctor *early* in all doubtful cases of illness in childhood.

As has been pointed out on many other occasions, however, the *preferable* alternative to testing the efficacy of anti-diphtheritic serum at any stage of diphtheria is to have had the child actively immunized against the disease at an early age—best at about the first birthday. The greatest number of diphtheria cases occurs amongst children between the ages of 1 and 5 years, and this is the logical reason why immunization *to prevent* diphtheria should be carried out at the first birthday.

An interesting account of the work that was done during the year in connection with diphtheria immunization appears on page 19, and on page 20 a statistical study is presented in tabular form to compare the incidence of and mortality from diphtheria amongst immunized and non-immunized children between the ages of 0 and 15 since the year 1930. In 1934, 601 children under 5 years and 1,468 over 5 years (2,069 altogether) received a complete course of immunizing injections. This is all to the good. It would have been better if the total number had been greater, and best if the majority of those immunized had been *under* instead of over 5 years of age.

It is well known that epidemics of infectious disease occur in cycles or waves. Diphtheria is now on the wane; it is descending towards the trough of the wave. If left to natural forces it will, after an interval, recur. It will mount towards the crest of the next wave. If a sufficiently large number of parents responded to the appeal for immunization, it would be possible to break the cycle of diphtheria and prevent it mounting again from the trough to the crest. So far as diphtheria is concerned, it may be claimed that active immunization "pours oil upon troubled waters."

Enteric Fever.—The number of cases (3) was the lowest since 1928 and there was only one death.

Measles.—Measles caused only 8 deaths in 1934, as compared with 32 in 1933.

Influenza.—Following on the epidemic in 1933, the number of cases in 1934 was few, and the number of deaths only 16, as compared with 141 in the previous year.

Hospitals.—On page 23 an account is given of the new extensions to the City Isolation Hospital, which were formally opened on 15th November, 1934, by the Lord Mayor and Chairman of the Health Committee (Alderman John Donovan, C.B.E., J.P.). They include a new cubicle observation ward, a new operating theatre and a new nurses' home.

On pages 24 to 29 Dr. G. Emrys Harries presents his first annual report as Medical Superintendent of the City Isolation Hospital, at which he commenced his duties on 17th September, 1934. Dr. Harries makes observations on the increased severity he noted in diphtheria cases admitted in the latter part of the year and describes his methods of treating them.

The policy of admitting to the Isolation Hospital selected cases of measles was continued during the year. Thirty-four measles cases were admitted and 4 died. There is no doubt that many patients suffering from measles stand a better chance of recovery if treated in hospital than if treated at home.

Certain beds at the Isolation Hospital are set aside for the treatment of puerperal fever, and, as far as possible, the institutional treatment of puerperal fever throughout the city is concentrated at the Isolation Hospital.

This year there appears for the first time a report on a full year's working at Llandough (Municipal General) Hospital. It is submitted by Dr. David G. Morgan, the Medical Superintendent, and contains many items of interest. After reading it, no one can doubt that Cardiff has in Llandough Hospital a very fine addition to its hospital services. In the past much has been said and written of the situation, architecture and equipment of Llandough Hospital, but "stone walls do not a prison make", nor do they make a hospital. In this first annual report some idea may be obtained of the important services to the sick that are being carried on by the *personnel* who work within those ornate walls. So far as the medical staff is concerned, certain features of its organization deserve special mention. The first is that, whereas in most municipal hospitals throughout the country it is customary to call upon the services of visiting consultant specialists only at the discretion of the medical superintendent, who remains in *medical* as well as administrative charge of the beds, at Llandough Hospital, although the Medical Superintendent has administrative control, the visiting consultant specialists, following the best traditions of the voluntary teaching hospitals, have full charge of the beds allotted to them and complete medical responsibility for the patients under their care. Secondly, the visiting specialists are assisted in their work by seven resident medical officers: (a) a senior officer on the medical side who is also Deputy Medical Superintendent and in professional knowledge and status corresponds to the medical registrar at a teaching hospital, (b) a senior officer on the surgical side who in professional knowledge and status corresponds to the surgical registrar of a teaching hospital and (c) 5 junior officers who in professional status correspond to the house physicians and house surgeons at a teaching hospital. The senior resident officers are employed in a permanent capacity. The juniors are appointed for six months, with the option of continuing for a further six months.

There is one other appointment on the Llandough Hospital staff which, when first made, was unusual for a municipal hospital, but is now becoming increasingly popular in municipal hospitals everywhere—the Lady Almoner. Those whose experience of municipal hospital administration derives from the period prior to the passing of the Local Government Act, 1929, often find it difficult to understand the nature, importance and full scope of a lady almoner's duties. These are concerned primarily with the social welfare of the patients, lacking attention to which the utmost efforts of medical and nursing staff may fall short of complete success. Usually included in her duties, and because she comes so much into friendly contact with the patients, is the task of assessing the extent of their liability to contribute towards the cost of their maintenance in hospital. It is extremely difficult to lay down the duties of a hospital almoner with mathematical precision. Her job has so many ramifications and depends so much upon her personality, that it must remain largely what she likes to make it. The very fact that it is bound up so much with the "human" side of life makes it impossible for her to act like a machine. Those who would criticize the idea of having an almoner's department in a municipal hospital may find little to satisfy their doubts in these comments, but although the defence of the almoner system may be vague, one thing is certain—it works. It has worked successfully for years in voluntary hospitals and has already proved so successful in municipal hospitals that some of the largest local authorities in this country, controlling numbers of municipal hospitals, are now appointing almoners at all of them.

Poor Law Medical Service.—The medical service supplied by the Public Assistance Committee was again much in demand. The strain upon the two whole-time District Medical Officers became so great that it was decided to relieve each of them of parts of their districts which were constituted into new districts. Two additional part-time District Medical Officers were appointed to work the two new districts.

Although City Lodge Hospital no longer functions as a general hospital for the treatment of the acute sick, it is being used increasingly for special medical services. Thus, on 31st December, 1934, 78 beds were provided for tuberculosis, 22 for maternity, 21 for venereal disease and 10 for mental disease. The provision for tuberculosis, maternity and venereal disease has been made an integral part of the public health

services of the city. Maternity patients are admitted direct from the ante-natal clinics, and it is significant that during the year 1934—the first full year's working of this arrangement—the number of confinements that took place in City Lodge, namely, 220, was higher than ever before. For difficult maternity cases, Professor G. I. Strachan may be called in a consultative capacity, and work is now proceeding for the re-equipment and reorganization of the maternity wards.

One other new development at City Lodge deserves mention here, although it is not yet complete—the establishment of a municipal fracture clinic. The need for treating fractures in clinics specially organized for the purpose has been recognized for a number of years on the Continent, and the setting up of similar ones in this country is urged in a report of the British Medical Association which was published in February of this year. In Cardiff, the opportunity is also being taken of bringing about much needed improvements in the orthopaedic service, by equipping part of the fracture unit premises for the purpose of a central orthopaedic clinic. Both orthopaedic and fracture cases will be under the supervision of the same surgical specialist—Mr. A. O. Parker. It is anticipated that the Cardiff Municipal Fracture and Orthopaedic Clinic at City Lodge will be the first of its kind in Great Britain. The scheme, which has received the approval of the City Council, is to be administered by co-operation between the Public Assistance, Health and Education Committees.

Maternity and Child Welfare.—An interesting table on page 68 shows that the attendance of expectant mothers at the ante-natal clinics has increased steadily during the last three years and now exceeds the average attendance for England and Wales.

Housing.—During the latter part of the year considerable activity was maintained in preparation for the representation of 17 Clearance Areas. Clearance Orders were made by the City Council in each case. As a result of a Ministry of Health inquiry, held early in 1935, all 17 Clearance Orders have been confirmed. Work is now proceeding for the rehousing of the 623 inhabitants of the areas and the demolition of the “unfit” dwellings vacated by them.

Legislation.—The Shops Act, 1934, contains provisions for the improvement of the sanitary conditions in shops and for the better regulation of hours of employment—especially of juveniles.

The Cardiff Corporation Act, 1934, contains a number of important provisions for maintenance of a pure food supply. Section 46 strengthens our powers to inspect meat before consumption—wherever it comes from. Section 47 improves the hygienic control of the manufacture of potted meat and ice-cream. Section 48 gives wider powers for the sampling and detention of food suspected to be the cause of food-poisoning. (It will be remembered that Section 106 of the Cardiff Corporation Act, 1930, makes the suspicion or diagnosis of food-poisoning notifiable by general medical practitioners on the same terms and in the same way as the notifiable infectious diseases).

Publications.—The following publications by members of the staff appeared in 1934 :—

“The Spread of Infectious Disease” by J. Greenwood Wilson, a paper read at a Sessional Meeting of the Royal Sanitary Institute at Newport, Mon., on February 9th, 1934. *Journal of the Royal San. Inst.* Vol. LIV—No. 11 (1934).

“Does Breast-Feeding Matter?” by J. Greenwood Wilson, a paper read at the Congress of the Royal Sanitary Institute held at Bristol, July 9th—14th, 1934. *Journal of the Royal San. Inst.* Vol. LV—No. 4 (1934).

“Meat Inspection Administration” by L. B. A. Grace, a paper read at the Congress of the Royal Sanitary Institute held at Bristol, July 9th—14th, 1934. *Journal of the Royal San. Inst.* Vol. LV—No. 5 (1934).

Staff Changes.—On 31st August, 1934, Dr. C. J. McSweeney relinquished his post as Deputy Medical Officer of Health, Medical Superintendent of the City Isolation Hospital and Medical Superintendent of the Lord Pontypridd Hospital. He left to take up the appointment of Medical Superintendent of the Cork Street Fever Hospital, Dublin.

On 17th September, 1934, Dr. G. Emrys Harries commenced duty as Medical Superintendent of the City Isolation Hospital, and on 1st October, 1934, Dr. Jean W. Smellie was transferred from her post as Resident Medical Officer at the Isolation Hospital to become an Assistant Medical Officer in the Public Health Department.

In December, 1934, Dr. W. Powell Phillips was promoted Deputy Medical Officer of Health, Dr. Cecil W. Anderson was appointed Medical Superintendent of the Lord Pontypridd Hospital and Dr. Helena J. Webster was appointed Inspector of Midwives.

Mr. L. B. A. Grace, who was appointed Veterinary Officer and Chief Inspector of Meat in December, 1932, and who commenced duty on 1st March, 1933, relinquished his post on 30th September, 1934, to take up the position of Chief Veterinary Inspector at Smithfield Market under the City of London Authority. Mr. John H. M. Hughes came from Birmingham Veterinary Staff on 22nd October, 1934, to fill the vacancy created by Mr. Grace's resignation.

J. GREENWOOD WILSON.

PUBLIC HEALTH DEPARTMENT,
CITY HALL, CARDIFF,
September, 1935.

CITY OF CARDIFF.

PUBLIC HEALTH DEPARTMENT.

EXPENDITURE 1933-34.

Service	Total Expenditure	Income (Excluding Government Grants)	Net Cost of Service
(1) HEALTH, ETC., SERVICES—	£	£	£
Sanitary Expenses	13,574	910	12,664
Food and Drugs (Adulteration) Act	1,044	142	902
Diseases of Animals Acts	480	81	399
Midwives Acts	23	.....	23
Shops Acts	537	5	532
Meteorological Station	66	.....	66
	15,724	1,138	14,586
(2) PREVENTION AND TREATMENT OF TUBERCULOSIS	28,810	446	28,364
(3) MATERNITY AND CHILD WELFARE SERVICE	17,754	2,811	14,943
(4) VENEREAL DISEASES	5,478	.....	5,478
(5) SCHOOL MEDICAL SERVICE	13,482	1,373	12,109
(6) MENTAL DEFICIENCY SERVICE	12,496	406	12,090
(7) PORT SANITARY SERVICE	4,347	1,232	3,115
(8) HOSPITALS ;—			
City Isolation Hospital (Sanatorium)	23,290	927	22,363
Caerau Smallpox Hospital	2,314	1,630	684
Lord Pontypridd Hospital (Dulwich House)*	1,641	1,641*
Llandough Hospital (Opened on 25th October, 1933)	43,319	3,687	39,632
Totals	£168,655	£15,291	£153,364

The above statement shows the net cost of the health services.

Certain of the services (viz., School Medical and Port) still rank for Government Grants on a percentage basis, but contributions from Government funds in respect of those services on which percentage grants were formerly paid are now merged in the block grant to the Council.

* Maintained by proceeds of the Lord Pontypridd bequest.

GENERAL HEALTH SERVICE.

I.—SUMMARY OF GENERAL AND VITAL STATISTICS.

Area (land and inland water)	13,628 acres
Population (Census, 1931)	223,589
Population (Estimated, mid-1934)	221,050
Number of persons per acre (exclusive of foreshore and Flat Holm)	18·4
Estimated number of inhabited houses	45,000
Estimated number of inhabited houses per acre (exclusive of foreshore and Flat Holm)	3·75
Estimated average number of persons per occupied house	4·9
Rateable value	£1,838,659
Estimated product of a penny rate	£6,925
Live births 3,503	Birth-rate per 1,000 15·8
Deaths 2,732	Death-rate per 1,000 12·3
Excess of births over deaths	Males, 304 ; Females, 467 ; Total, 771
Deaths under 1 year 261	Rate per 1,000 births 74

Deaths of women in child-birth :—

	<i>Number.</i>	<i>Rate per 1,000 Live Births.</i>	<i>Rate per 1,000 Total Births.</i>
Puerperal sepsis	12	3·42	3·25
Other puerperal causes	15	4·28	4·06
Totals	27	7·70	7·31

Deaths from various causes :—

	<i>Number.</i>	<i>Death-rate per 1,000.</i>
Typhoid fever	1	0·00
Measles	8	0·03
Scarlet fever	5	0·02
Whooping cough	14	0·06
Diphtheria....	21	0·09
Tuberculosis of respiratory system	205	0·93
Other tuberculous diseases	50	0·23
Cancer	300	1·36

II.—AREA AND POPULATION.

Area.—The total area of Cardiff (including inland water, foreshore and Flat Holm) is 13,628 acres ; excluding inland water, the foreshore and Flat Holm it is 11,580 acres. The area of each municipal ward is as follows :—

<i>Municipal Ward.</i>	<i>Acres (Land and Inland Water).</i>
Central	535
South	1,073
Cathays	338
Adamsdown	1,320
Riverside	320
Canton	247
Grangetown	949
Roath	754
Plasnewydd	233
Splott	1,912
Penylan	1,765
Llandaff	2,719
Gabalfa	1,463

Population.—According to the Census of 1931, the population of Cardiff was 223,589 (males 107,309 and females 116,280), and the populations of the municipal wards, according to the Census, were as follows :—

<i>Municipal Ward.</i>	<i>Population.</i>
Central	13,544
South	13,635
Cathays	16,566
Adamsdown	17,209
Riverside	17,602
Canton	17,273
Grangetown	15,403
Roath	15,792
Plasnewydd	15,056
Splott	20,898
Penylan	14,146
Llandaff	27,762
Gabalfa	18,703

The Registrar-General's estimate of the population of the city for mid-1934 was 221,050, i.e., 2,539 less than that enumerated at the Census of 1931 and 950 less than the estimated population for 1933. The reduction in the estimate is difficult to understand having regard to the natural increase in the population (i.e., the excess of births over deaths) that has taken place and to the many houses that have been built and occupied since 1931. Apparently there has been no great reduction in the population of any of the 13 municipal wards and there have certainly been increases in several of them, especially Llandaff, Splott, Penylan and Gabalfa.

III.—BIRTHS.

The numbers of births and still-births registered during 1934 and allocated to Cardiff, sub-divided according to sex and legitimacy, are shown in the following tables :—

Births.

	Legitimate	Illegitimate	Totals
Males	1,728	82	1,810
Females	1,634	59	1,693
Totals	3,362	141	3,503

Still-births.

	Legitimate	Illegitimate	Totals
Males	92	5	97
Females	87	5	92
Totals	179	10	189

The numbers of live births and still-births belonging to, but registered outside, Cardiff were 39 (21 males and 18 females) and 2 (males) respectively, whilst 374 births (190 males and 184 females) and 46 still-births (27 males and 19 females) belonging to other districts were registered in Cardiff. In the net figures shown above allowance has been made for these corrections.

The 3,503 registered births were equivalent to a birth-rate of 15·8 per 1,000 of the population, as compared with 15·5 per 1,000 in 1933. The rates for legitimate births and illegitimate births were 15·2 and 0·6 per 1,000 respectively. The birth-rate for each of the last ten years was as follows :—

<i>Year.</i>	<i>Birth-rate per 1,000.</i>
1925	20·6
1926	20·1
1927	18·1
1928	18·0
1929	17·5
1930	16·9
1931	16·8
1932	15·7
1933	15·5
1934	15·8

The 189 registered still-births constituted a rate of 51 per 1,000 total (live and still) births, as compared with 49 in 1933.

The following is a comparison of the birth-rate for 1934 and the preceding ten years with the birth-rates in England and Wales and the 121 Great Towns for 1934 :—

				<i>Birth-rate per 1,000.</i>
CARDIFF	1934	....	....	15·8
	1924-1933	....	....	18·1
England and Wales, 1934	....	....	....	14·8
121 Great Towns, 1934	....	....	....	14·7

The birth-rates for 1934 in the municipal wards were as follows ;—

<i>Municipal Ward.</i>	<i>Birth-rate per 1,000.</i>
Central	14·4
South	16·5
Cathays	14·5
Adamsdown	19·4
Riverside	13·5
Canton	13·6
Grangetown	18·1
Roath	13·5
Plasnewydd	11·0
Splott	18·6
Penylan	10·3
Llandaff	18·4
Gabalfa	13·3

It will be seen that, as for many years, Adamsdown again had the highest and Penylan the lowest birth-rate.

IV.—DEATHS.

Deaths from All Causes.—The total number of deaths from all causes and at all ages registered during the year and allocated to Cardiff, after allowing for the necessary corrections, was 2,732 (1,506 males and 1,226 females). The death-rate per 1,000 of the population was 12·3. The total number of deaths registered in Cardiff was 2,870, but 487 of these were of non-residents, which occurred mainly in hospitals and nursing homes, and 349 deaths of residents of Cardiff occurred and were registered in other areas—including Penarth, where Llandough Hospital is situated. Allowance has been made for these outward and inward transferable deaths in arriving at the net number. Of the 2,732 deaths belonging to Cardiff, 1,090, or 39·9 per cent. occurred in public institutions or nursing homes, as compared with 37·5 per cent. in 1933 and 38·6 in 1932. The death-rate for each of the last ten years was as follows :—

<i>Year.</i>						<i>Death-rate per 1,000.</i>
1925	....	....	....	....	....	12·8
1926	....	....	....	....	....	10·8
1927	....	....	....	....	....	12·6
1928	....	....	....	....	....	11·7
1929	....	....	....	....	....	12·9
1930	....	....	....	....	....	11·4
1931	....	....	....	....	....	12·8
1932	....	....	....	....	....	12·5
1933	....	....	....	....	....	13·5
1934	....	....	....	....	....	12·3

As stated above, the death-rate for 1934 was 12·3 per 1,000. In comparing the death-rate with that for England and Wales and other towns, however, it is necessary to make allowance for differences in the sex and age groups of the population as compared with those for England and Wales. In the following statement, in which the death-rate for Cardiff in 1934 is compared with the rate for the preceding ten years and with the rates for England and Wales and the 121 Great Towns in 1934, the necessary allowance has been made by multiplying the death-rates for Cardiff and the 121 Great Towns by the appropriate factors :—

						<i>Death-rate per 1,000.</i>
CARDIFF	{ 1934	....	....	....	....	13·0
	{ 1924-33	....	....	....	....	13·0
England and Wales, 1934	....	....	....	....	....	11·8
121 Great Towns, 1934	....	....	....	....	....	12·4

The death-rate for 1934 in each municipal ward was as follows :—

<i>Municipal Ward.</i>						<i>Death-rate per 1,000.</i>
Central	....	....	....	....	....	14·2
South	....	....	....	....	....	12·6
Cathays	....	....	....	....	....	12·6
Adamsdown	....	....	....	....	....	16·4
Riverside	....	....	....	....	....	13·6
Canton	....	....	....	....	....	11·7
Grangetown	....	....	....	....	....	11·8
Roath	....	....	....	....	....	12·5
Plasnewydd	....	....	....	....	....	13·3
Splott	....	....	....	....	....	11·0
Penylan	....	....	....	....	....	10·7
Llandaff	....	....	....	....	....	9·5
Gabalfa	....	....	....	....	....	9·4

The following table, compiled from figures supplied by the Registrar-General, shows the causes of death at various ages during 1934 :—

CAUSES OF DEATH	ALL AGES			AGE PERIODS								
	M.	F.	Totals	Under 1 yr.	1-2 yrs.	2-5 yrs.	5-15 yrs.	15-25 yrs.	25-45 yrs.	45-65 yrs.	65-75 yrs.	75 years and upwards
Typhoid and Paratyphoid Fevers	1	...	1	...	...	...	...	...	1	...	...	...
Measles	5	3	8	1	3	3	1	...	...	...	...	...
Scarlet Fever	2	3	5	1	1	1	2	...	...	...	...	...
Whooping Cough	8	6	14	8	2	4	...	...	...	...	...	...
Diphtheria	11	10	21	...	2	5	13	1	...	...	...	...
Influenza	10	6	16	2	...	1	...	1	2	6	3	1
Encephalitis Lethargica	2	3	5	...	...	...	...	...	1	3	1	...
Cerebro-Spinal Fever	2	2	4	2	1	...	...	1	...	...	...	...
Tuberculosis of Respiratory System	117	88	205	1	...	...	5	48	93	51	7	...
Other Tuberculous Diseases	32	18	50	1	4	8	10	12	10	4	1	...
Syphilis	6	2	8	...	...	...	...	...	2	6	...	...
General Paralysis of the Insane, Tabes Dorsalis	18	4	22	...	...	...	...	...	6	12	4	...
Cancer, Malignant Disease	158	142	300	...	...	1	1	2	22	124	99	51
Diabetes	16	17	33	...	...	...	...	2	3	13	13	2
Cerebral Haemorrhage, etc.	30	42	72	...	...	...	...	...	2	21	20	29
Heart Disease	352	297	649	...	...	...	3	9	37	177	203	220
Aneurysm	11	...	11	...	...	...	...	...	3	7	1	...
Other Circulatory Diseases	102	74	176	1	...	...	...	...	5	44	50	76
Bronchitis	48	41	89	10	2	1	...	1	1	23	18	33
Pneumonia (All Forms)	74	56	130	22	16	7	3	4	8	35	19	16
Other Respiratory Diseases	13	13	26	2	1	...	1	...	4	8	4	6
Peptic Ulcer	22	4	26	...	...	...	...	1	7	12	5	1
Diarrhoea, etc.	27	15	42	30	4	...	...	2	2	3	...	1
Appendicitis	14	4	18	...	...	...	4	4	4	5	1	...
Cirrhosis of Liver	3	2	5	...	...	...	...	...	1	3	1	...
Other Diseases of Liver, etc.	5	7	12	...	...	...	1	...	1	4	5	1
Other Digestive Diseases	27	36	63	8	2	2	2	3	7	18	10	11
Acute and Chronic Nephritis	54	42	96	...	...	...	3	2	14	36	25	16
Puerperal Sepsis	...	12	12	...	...	...	...	4	8	...	...	...
Other Puerperal Causes	...	15	15	...	...	...	...	2	13	...	...	...
Congenital Debility, Pre- mature Birth, Malform- ations, etc.	89	58	147	147	...	...	...	...	...	...	...	...
Senility	31	54	85	...	...	...	...	...	...	1	15	69
Suicide	21	6	27	...	...	...	...	1	12	11	3	...
Other Violence	59	31	90	3	2	6	7	7	20	22	10	13
Other Defined Diseases	136	113	249	22	4	8	12	8	29	72	55	39
Causes ill-defined or un- known	...	...	...	...	...	...	...	...	...	...	...	...
All Causes	1,506	1,226	2,732	261	44	47	68	115	318	721	573	585

Cancer.—There was a further slight reduction in the death-rate from cancer or malignant disease compared with the death-rates for the two previous years. The death-rates for 1934, compared with the death-rates for previous years, were as follows:—

	Death-rate per 1,000		
	Males	Females	Both Sexes
1934	1.49	1.24	1.34
1933	1.46	1.36	1.41
1924-1933 ...	1.19	1.31	1.25

The deaths from cancer during 1934 are analysed according to age, sex and localisation of the disease in the following table:—

Cancer— Malignant Disease	Under 15 years		15-25 years		25-45 years		45-65 years		65-75 years		75 years and upwards		All Ages		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes
Buccal Cavity and Pharynx							5		9		5	1	19	1	20
Digestive Organs and Peritoneum				1	4	2	32	22	33	21	18	11	87	57	144
Respiratory Organs					2	2	6		3		2		13	2	15
Uterus						4		23		9		2		38	38
Other Female Genital Organs						1		9		2				12	12
Breast						4		11		5		3		23	23
Male Genito-urinary Organs	1				1		9		11		5		27		27
Skin							1		2	1	1	2	4	3	7
Other or Unspecified Organs	1			1	2		3	3	1	2	1		8	6	14
Totals	2			2	9	13	56	68	59	40	32	19	158	142	300

Deaths from Road Accidents.—The number of deaths from violence (excluding suicide) and the number and proportion of these due to road accidents in each year since 1923 are shown in the following table:—

Year	Total Deaths from Violence (excluding Suicide)	Deaths from Road Accidents	
		Number	Percentage
1923	100	14	14.0
1924	97	21	21.6
1925	91	23	25.3
1926	107	17	15.9
1927	103	20	19.4
1928	103	26	25.2
1929	98	16	16.3
1930	98	29	29.6
1931	93	30	32.3
1932	110	31	28.2
1933	88	26	29.5
1934	90	35	38.9

It will be seen that the number of deaths from road accidents in 1934 (35) was higher than that for any year since the records have been kept.

The deaths from road accidents in 1934 have been analysed in such a way as to show the type of vehicle and the class of person involved. The results are presented in the following table :—

Vehicles	Fatal Accidents	Persons Killed					Totals
		Motor Cyclists	Passen- gers	Pedal Cyclists	Drivers	Pedes- trians	
Heavy motor vehicles	5	....	....	....	1	4	5
Light motor cars	17	....	3	....	1	13	17
Motor cycles	4	2	1*	....	....	1	4
Motor cycle combinations	2	....	1	....	....	1	2
Pedal cycle	1	....	....	....	....	1	1
Heavy motor vehicle and motor cycle	1	1	....	....	....	....	1
Heavy motor vehicles and pedal cycles	2	....	....	2	....	....	2
Light motor car and motor cycle	1	1	....	....	....	....	1
Heavy motor vehicle and electric tramcar	1	....	1	....	....	....	1
Steam lorry and pedal cycle	1	....	....	1	....	....	1
Totals	35	4	6	3	2	20	35

* Pillion rider.

Maternal Mortality.—It is to be regretted that the maternal mortality rate in 1934 was comparatively high. The number of deaths due to puerperal sepsis was 12 and the number due to other puerperal causes 15, a total of 27, corresponding to rates of 7·70 per 1,000 live births and 7·31 per 1,000 total live and still-births respectively. The maternal death-rate has varied during the ten years 1925-1934 as follows :—

Year	Death-rate per 1,000 Live Births		
	Puerperal Sepsis	Other Puerperal Causes	Total
1925	1·71	2·78	4·49
1926	1·32	3·97	5·29
1927	1·71	2·20	3·91
1928	2·44	3·42	5·86
1929	0·76	2·80	3·56
1930	2·64	2·64	5·28
1931	1·85	1·59	3·44
1932	1·14	4·28	5·42
1933	1·45	3·49	4·94
1934	3·42	4·28	7·70

In the following table the death-rate of women in child-birth for 1934 is compared with the death-rate for the preceding ten years and with the death-rates for 1934 in England and Wales and in the 121 Great Towns respectively :—

	Deaths of Women in Child-birth per 1,000 Live Births		
	Puerperal Sepsis	Other Puerperal Causes	Total
CARDIFF { 1934 ...	3.42	4.28	7.70
{ 1924-1933 ...	1.75	3.00	4.75
England and Wales, 1934 ...	2.03	2.57	4.60
121 Great Towns, 1934 ...	1.89	2.28	4.17

The following table shows the causes of the 27 deaths in age periods :—

Causes of Death	Age Periods			Totals
	15-25 years	25-35 years	35-45 years	
Post-abortive sepsis	1	1	2	4
Ectopic gestation .....	...	...	2	2
Puerperal haemorrhage .....	...	2	1	3
Puerperal sepsis not returned as post-abortive	3	2	3	8
Puerperal albuminuria and convulsions	2	2	2	6
Puerperal embolism and sudden death .....	...	1	...	1
Other accidents of childbirth .....	...	2	1	3
Totals	6	10	11	27

Seven of the deaths occurred during pregnancy (four following miscarriages) and 20 during or following child-birth, one of which occurred outside Cardiff. Six of the deaths during pregnancy occurred in hospitals and one in a private dwelling-house.

The following particulars refer to the 20 cases in which death occurred during or following child-birth :—

Economic and Domestic Circumstances—

Comfortable	10
Poor	10
	— 20

Pregnancy—

Primipara	13
Multipara	7
	— 20

Ante-natal Care—

At Ante-natal Clinic	7
By Medical Practitioner	7
By Midwife only	5
None	1
	— 20

Place of Confinement—

Private dwelling-houses	8
Hospitals	8
Private nursing homes	4
	— 20

Labour—

Attended by Medical Practitioner	....	....	19	
Attended by Midwife alone	....	....	1	
			—	20

Delivery—

Instrumental	....	....	....	13	
Non-instrumental	....	....	....	7	
				—	20
Admitted to and died in Hospital after confinement				8	

The foregoing particulars show, amongst other things, that the majority of the women who died received careful attention prior to and during confinement. The relatively large number of deaths that occurred during the year may therefore be regarded as fortuitous and exceptional.

Infant Mortality.—The number of deaths under one year of age was 261. Of these, 245 were deaths of legitimate infants and 16 were of illegitimate infants. The infant mortality rate was 74 per 1,000 live births (legitimate 73 and illegitimate 113).

The infant mortality rate in 1934, compared with the rate in the preceding ten years and with the rates for England and Wales and the 121 Great Towns in 1934, was as follows :—

				<i>Deaths under 1 year per 1,000 Births.</i>
CARDIFF	{ 1934	....	....	74
	{ 1924-1933	....	....	77
England and Wales, 1934	....	....	....	59
121 Great Towns, 1934	....	....	....	63

The deaths from various causes under one year of age in several age periods during 1934, compiled from figures supplied by the Registrar-General, are shown in the following table :—

Causes of Death	Under 1 week	1—2 weeks	2—3 weeks	3—4 weeks	Total under 4 weeks	4 weeks —3 months	3—6 months	6—9 months	9—12 months	Totals
Measles .....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Whooping Cough .....	.....	.....	.....	.....	.....	1	1	2	4	8
Diphtheria .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenza .....	.....	.....	1	.....	1	.....	.....	.....	1	2
Tuberculosis of Nervous System .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuberculosis of Intestines and Peritoneum .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Tuberculosis .....	.....	.....	.....	.....	.....	.....	.....	1	1	2
Syphilis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningitis .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Convulsions	5	2	1	.....	8	1	1	.....	1	11
Bronchitis .....	.....	.....	2	1	3	1	4	1	1	10
Pneumonia	1	.....	.....	1	2	2	7	7	4	22
Other Respiratory Diseases	1	.....	.....	.....	1	.....	.....	1	.....	2
Inflammation of Stomach .....	.....	.....	.....	.....	.....	1	2	1	.....	4
Diarrhoea and Enteritis	1	.....	.....	2	3	10	10	3	4	30
Hernia, Intestinal Obstruction .....	.....	.....	.....	.....	.....	.....	1	2	.....	3
Congenital Malformation	10	4	2	.....	16	8	2	.....	.....	26
Congenital Debility	1	1	.....	.....	2	.....	.....	.....	.....	2
Premature Birth	83	6	6	2	97	3	.....	.....	.....	100
Injury at Birth	8	.....	.....	.....	8	.....	.....	.....	.....	8
Atelectasis	6	.....	.....	1	7	.....	.....	.....	.....	7
Icterus	1	1	.....	.....	2	.....	.....	.....	.....	2
Diseases of Umbilicus .....	.....	1	.....	.....	1	.....	.....	.....	.....	1
Other Diseases of Early Infancy	1	.....	.....	.....	1	.....	.....	.....	.....	1
Suffocation in Bed	2	.....	.....	.....	2	.....	.....	.....	.....	2
Inattention at Birth	1	.....	.....	.....	1	.....	.....	.....	.....	1
Other forms of Violence .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes .....	.....	2	.....	1	3	3	5	3	1	15
All Causes	121	17	12	8	158	30	34	22	17	261
Percentage of Total Deaths under 1 year	46·4	6·5	4·6	3·0	60·5	11·5	13·0	8·4	6·5	100·0

The following tables regarding infant mortality are lettered A to E for convenience of reference in the commentary on pages 14-16.

TABLE A.

Infant Mortality Rate for Cardiff during the years 1875-1934 :—

<i>Year.</i>	<i>Deaths under 1 year per 1,000 Births.</i>		<i>Year.</i>	<i>Deaths under 1 year per 1,000 Births.</i>	
1875	162	1905	....	118
1876	143	1906	....	134
1877	137	1907	....	131
1878	149	1908	....	124
1879	129	1909	....	103
1880	165	1910	....	111
1881	130	1911	....	134
1882	144	1912	....	111
1883	139	1913	....	115
1884	168	1914	....	109
1885	189	1915	....	107
1886	168	1916	....	89
1887	172	1917	....	98
1888	143	1918	....	104
1889	157	1919	....	95
1890	167	1920	....	84
1891	153	1921	....	95
1892	163	1922	....	82
1893	179	1923	....	73
1894	141	1924	....	79
1895	179	1925	....	93
1896	165	1926	....	60
1897	151	1927	....	80
1898	158	1928	....	77
1899	184	1929	....	84
1900	141	1930	....	72
1901	148	1931	....	77
1902	145	1932	....	76
1903	122	1933	....	77
1904	144	1934	....	74

TABLE B.

Infant Mortality Rate for Cardiff during the years 1876-1934 compared with that for England and Wales during the same period. (For the years 1876-1930 the average rates for five-yearly periods are given in sequence and from 1920 to 1934 the rates in each year are compared) :—

<i>Period.</i>	<i>Deaths under 1 year per 1,000 births.</i>	
	<i>Cardiff.</i>	<i>England and Wales.</i>
1876-80	145	145
1881-85	154	139
1886-90	161	145
1891-95	163	151
1896-1900	160	156
1901-05	135	138
1906-10	121	117
1911-15	115	110
1916-20	94	90
1921-25	84	76
1926-30	75	68
<hr/>		
1920	84	80
1921	95	83
1922	82	77
1923	73	69
1924	79	75
1925	93	75
1926	60	70
1927	80	70
1928	77	65
1929	84	74
1930	72	60
1931	77	66
1932	76	65
1933	77	64
1934	74	59

TABLE C.

Infant Mortality Rate (i.e., deaths under 1 year per 1,000 births) during the 12 years 1923-34, as compared with the rates for Swansea, Newport (Mon.), Merthyr Tydfil, Rhondda, Bristol and England and Wales :—

Year	Cardiff	Swansea	Newport	Merthyr Tydfil	Rhondda	Bristol	England and Wales
1923	73	78	65	87	86	62	69
1924	79	81	73	81	79	71	75
1925	93	69	89	99	96	76	75
1926	60	81	64	84	69	70	70
1927	80	83	67	105	86	58	70
1928	77	61	69	93	80	59	65
1929	84	73	70	107	82	60	74
1930	72	64	56	92	85	57	60
1931	77	70	79	105	81	50	66
1932	76	69	76	73	71	53	65
1933	77	75	94	90	92	55	64
1934	74	62	80	74	60	46	59
<hr/>							
Average	77	72	73	90	80	60	68

TABLE D.

Infant Mortality Rate (i.e., deaths under 1 year per 1,000 births) for all the Municipal Wards* of Cardiff during the 12 years 1923-34 :-

Year 1	Adams- down 2	Central 3	South 4	Grange- town 5	Splott 6	Roath 7	Llandaff 8	Canton 9	Plas- newydd 10	Gabalfa 11	Cathays 12	River- side 13	Penylan 14
1923	97	107	88	81	70	66	81	64	60	69	43	60	63
1924	129	86	127	72	67	76	71	65	73	80	36	68	44
1925	103	100	99	73	116	88	88	125	105	99	74	69	26
1926	80	90	52	88	50	55	42	61	80	46	57	51	51
1927	87	139	97	71	98	87	82	96	42	76	62	56	25
1928	72	101	106	94	54	86	91	82	58	55	80	66	65
1929	128	97	81	92	76	99	88	62	89	54	80	64	107
1930	82	75	101	79	81	65	64	48	79	67	76	72	40
1931	77	79	87	91	89	71	63	65	76	82	66	71	81
1932	120	88	69	102	82	75	74	45	69	78	57	49	83
1933	107	86	133	84	89	55	59	90	52	45	88	69	51
1934	82	100	86	83	47	70	75	64	86	86	74	59	83
Average	97	96	94	84	77	74	73	72	72	70	66	63	60

* The present municipal wards were constituted in November, 1922.

TABLE E.

Under-one-month and under-one-year mortalities for Cardiff, as compared with those for England and Wales, during the years 1925-34 :-

Year	Cardiff		England and Wales	
	Deaths under 4 Weeks per 1,000 Births	Deaths under 1 Year per 1,000 Births	Deaths under 4 Weeks per 1,000 Births	Deaths under 1 Year per 1,000 Births
1925	36	93	32	75
1926	27	60	32	70
1927	38	50	32	70
1928	32	77	31	65
1929	37	84	33	74
1930	36	72	31	60
1931	35	77	32	66
1932	39	76	32	65
1933	35	77	32	64
1934	45	74	31	59

Certain general conclusions may be drawn from a study of the figures given in the foregoing tables (A to E). In the first place, it is evident that there has been a substantial and lasting reduction in the infant mortality rate, both for Cardiff and for England and Wales, since the year 1875. Secondly, it will be observed (Table B) that prior to the five-yearly period 1926-30 the decline in the infant mortality rate for Cardiff followed very closely the decline in the infant mortality rate for England and Wales. After 1925, something seemed, as it were, to hold up Cardiff in the race, with the result that during recent years "England and Wales" has "beaten" Cardiff by many points (in 1934 by 15) in respect of infant mortality rates.

Table C, which compares the infant mortality rate for Cardiff during the past 12 years with that for neighbouring towns (including Bristol) and again with that for England and Wales, shows pretty much what we should expect from industrial areas like Merthyr Tydfil and Rhondda, but it is surprising that Newport and Swansea,

which are more industrialised than Cardiff, should show infant mortality rates that on the average for the twelve-year period are so much more favourable than Cardiff's rates.

Bristol, which looks at Cardiff from across the Channel (only a few miles away), has an infant mortality rate which is phenomenal. Although Bristol, too, is a highly industrialised city and possesses slums in a sense that Cardiff has never known, it has for years had an infant mortality rate well below the average for England and Wales, and to-day has one of the lowest infant mortality rates in the country, rivalling even the infant mortality rates for healthy residential areas like Hampstead. It is doubtful whether the maternity and child welfare service of Bristol is any better organized than that of Cardiff, and the amount of milk distributed there for the better nourishment of mothers and infants is not greater than in Cardiff. There are, however, two respects in which the social conditions of Bristol differ from those of Cardiff. First, thanks to the number and variety of its industries, Bristol has never known economic distress to anything like the same extent as Cardiff. Secondly, although it is a busy and important port, Bristol has not Cardiff's problem of alien seamen, who intermarry, settle down and produce half-caste children.

If we turn now to Table D, which compares the infant mortality rate in different municipal wards of Cardiff for the 12 years 1923-34, we shall see that the highest rates occur in the wards that go to make up (in whole or part) the "docks area." Taking the averages on the bottom line, if we select those for the three wards Adamsdown, Central and South, we get a further average of $287 \div 3 =$ approximately 96. The average of the averages for the remaining 10 wards (Grangetown to Penylan) is approximately 71—a reduction of 3, as compared with the total rate of 74 for the whole of Cardiff in 1934.

In studying the problem of infant mortality in Cardiff, certain general principles should be borne in mind. The first is that whatever factors may have played a part in bringing down the under-one-year rate in all civilised countries, they have hitherto had much less effect upon the loss of life of infants under one month. Thus, even in New Zealand and Holland, whose total infant mortality rates have been brought to an exceptionally low figure (New Zealand less than 40), the under-one-month rate has shown little reduction in the past 25 years. Closer analysis of the statistics of infant deaths has shown that it is particularly at the very early ages, the first few days of life, that there has been no sensible diminution of the loss of life, and it is evident that any examination of the cause of this early loss must include those conditions which operate to produce death before and during the act of birth—those still-births which mean a considerable wastage of potential lives, but which have until quite recent years received little attention from anybody.

In Cardiff during 1934, 60·5 per cent. of infants dying under one year, died within the first four weeks of life. This proportion is high compared to that which is usually met with elsewhere (whatever be the *total* infant mortality rate), the average for England and Wales in recent years having been in the neighbourhood of 40 per cent. In 61·4 per cent. of those infants who died in Cardiff under one month old, prematurity was given as the cause of death. The total deaths from prematurity works out at 38 per cent. of the total infant deaths under one year of age, and is high compared to the figure usually given for deaths from prematurity in other towns. So far as past records are concerned, very little information is available as to any underlying cause of the prematurity, but special inquiries are now being made into infant deaths in Cardiff, particularly where premature birth is recorded, in an endeavour to shed some light on the problem.

Writing of the decrease in the national under-one-year mortality rate, Sir Geo. Newman, in his Annual Report for 1933, says that statistics "bear out the contention that the influences adverse to infant life which existed some 20 years ago and which were intensified in hot weather *are now inoperative*, and that certain factors associated with rise of temperature (especially earth temperature) which were formerly held to be productive of much ill-health and mortality in infants have been eliminated to such an extent that the heat of the summer of 1921 was reflected only in a slight rise of the

infant mortality rate over that of each of the two preceding years, while in 1933 the steady drop in the rate was continued. This is significant." Sir George continues, "There may be some difference of opinion as to what these factors are and the part each plays. But it is a matter of common agreement that improved housing, personal and domestic cleanliness, increased sanitation, public cleansing, disposal of refuse, storage and preparation of food, and the relative freedom from dust of public thoroughfares have all contributed to the result. In addition to these improvements in the environment of infants, there is now available a well-organized service of home visiting, medical consultations, treatment centres, etc., which is available for assistance to mothers in the *personal nurture of infancy*."

The reduction of the Cardiff infant mortality rate from 162 in 1875 to 74 in 1934 suggests that all these factors, both environmental and personal, must have been operative to some extent in Cardiff. But why they began to operate with less force in Cardiff than in England and Wales generally from 1925 onwards is difficult to answer with certainty.

A study of Table E shows that both for Cardiff and for England and Wales generally fluctuations in the under-one-year mortality rate correspond fairly closely with similar fluctuations in the under-one-month mortality rate. Thus for Cardiff in 1926, 1929 and 1932 respectively, under-one-year mortality rates of 60, 84 and 76 per 1,000 births compare with under-one-month rates of 27, 37 and 39 per 1,000 births, whereas for England and Wales in the same years, under-one-year mortality rates of 70, 74 and 65 per 1,000 births compare with under-one-month mortality rates of 32, 33 and 32 per 1,000 births.

It may be said that the receding tide of under-one-year mortality has left behind it a bar against which the pool of under-one-month mortality seeks in vain an adequate channel of escape. For Cardiff the bar is higher and apparently more resistant than that for England and Wales.

It has been shown that the highest infant mortality rates for Cardiff (Table D) in the years 1923-34 are to be found in those municipal wards which include the "docks area." As the population in this area is mainly associated with Cardiff's principal basic industry—shipping—it is not unreasonable to suggest that a revival of the shipping trade might be expected to result in a reduction of the infant mortality rate for Cardiff to a level equal at least to the average for the 121 Great Towns.

V.—NOTIFIABLE DISEASES (OTHER THAN TUBERCULOSIS).

The incidence of notifiable diseases (other than tuberculosis) is shown in the following table, which also shows the number of cases admitted to hospital and the number of deaths :—

Disease according to Notification	Cases Notified	Notified Cases admitted to Isolation Hospital	Deaths
Smallpox	..	..	..
Scarlet Fever	905	437	5
Diphtheria	520	489	21
Enteric Fever	3	3	1
Pneumonia*	140	2	130
Cerebro-Spinal Fever	7	3	4
Acute Poliomyelitis	..	..	..
Acute Polioencephalitis	..	..	..
Encephalitis Lethargica	3	..	5
Dysentery	8	8	2
Ophthalmia Neonatorum	33	..	1
Erysipelas	116	22	6
Puerperal Fever	58†	6	12
Puerperal Pyrexia	51‡	1	..
Malaria	..	..	..
Food Poisoning	..	..	..

*Only such cases of pneumonia as fall into the categories "acute primary" and "influenzal" are notifiable. Deaths from all forms of pneumonia are included in the last column.

†Including 14 cases among non-residents that occurred in institutions.

‡Including 12 cases among non-residents that occurred in institutions.

The notified cases of disease are analysed in various age groups in the following table :—

	Years												Totals
	—1	1—	2—	3—	4—	5—	10—	15—	20—	35—	45—	65—	
Scarlet Fever	6	21	60	63	76	370	208	36	51	10	4	.....	905
Diphtheria	2	14	18	32	36	243	113	19	31	6	6	.....	520
Enteric Fever .....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	.....	3
Pneumonia	7	8	6	5	3	12	8	12	24	10	27	18	140
Cerebro-Spinal Fever	1	2	1	.....	.....	1	.....	2	.....	.....	.....	.....	7
Acute Poliomyelitis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Acute Polioencephalitis .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Encephalitis Lethargica .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3
Dysentery	1	.....	.....	1	.....	1	4	.....	.....	.....	1	.....	8
Ophthalmia Neonatorum	15	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
Erysipelas .....	.....	1	.....	1	1	4	3	5	15	16	50	20	116
Puerperal Fever .....	.....	.....	.....	.....	.....	.....	.....	6	45	7	.....	.....	58
Puerperal Pyrexia .....	.....	.....	.....	.....	.....	.....	.....	3	39	9	.....	.....	51
Malaria .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Food Poisoning .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

The incidence of scarlet fever and diphtheria in the municipal wards and in institutions was as follows :—

Municipal Ward, etc.	Scarlet Fever		Diphtheria	
	Cases Notified	Case-rate per 1,000	Cases Notified	Case-rate per 1,000
Central	46	3.5	20	1.5
South	44	3.1	57	4.0
Cathays	67	4.0	31	1.8
Adamsdown	41	2.5	46	2.8
Riverside	72	4.4	13	0.8
Canton	74	4.3	15	0.9
Grangetown	88	5.7	49	3.2
Roath	55	3.4	25	1.6
Plasnewydd	65	4.4	27	1.8
Splott	64	2.9	53	2.4
Penylan	42	2.7	24	1.5
Llandaff	168	5.6	119	4.0
Gabalfa	62	3.1	16	0.8
Institutions	17	—	25	—
Totals	905	4.1	520	2.3

Smallpox.—No cases of smallpox were notified during 1934.

Vaccination.—The results of the work of the vaccination officers during the year in connection with 3,838 children are given in the following statement :—

	Number.	Percentage.
Successfully vaccinated	1,519	39.6
Insusceptible	3	0.1
Postponed	23	0.6
Certificates of exemption	1,904	49.6
Died unvaccinated	236	6.1
Unaccounted for (including cases removed to other districts)	153	4.0
Total	3,838	100.0

It will be observed from the following table that the proportion of children not returned as vaccinated and the proportion of certificates of exemption from vaccination are steadily increasing :—

Year	Successfully Vaccinated	Certificates of Exemption	Percentage not returned as Vaccinated	Percentage of Certificates of Exemption
1922	2,671	1,900	47·7	37·2
1923	4,223	1,538	35·5	23·5
1924	2,801	1,533	44·2	30·5
1925	2,541	1,533	48·1	31·3
1926	2,132	1,585	51·2	31·0
1927	2,027	1,255	52·2	29·5
1928	2,215	1,413	47·8	33·2
1929	1,797	1,520	56·7	36·6
1930	2,009	1,487	50·1	36·9
1931	1,905	1,507	52·5	37·6
1932	1,758	1,639	54·0	42·9
1933	1,501	1,791	59·6	48·1
1934	1,519	1,904	60·4	49·6

Scarlet Fever.—It will be seen from the figures given below that, although the number of cases of scarlet fever notified was comparatively high, there were 403 less than in 1933. The epidemic, which reached its maximum in October, 1933, continued until the end of April, 1934, but from that time to the end of the year the number of cases declined. It now appears that, as mentioned in the report for 1933, the number of cases, for a few years at least, will be considerably less. The disease was of a mild type and was the cause of only 5 deaths.

Year.	Cases.	Deaths.
1925	302	4
1926	261	—
1927	227	—
1928	263	2
1929	640	2
1930	537	—
1931	632	5
1932	726	3
1933	1,308	4
1934	905	5

Diphtheria.—There was a slight increase (44) in the number of cases of diphtheria notified as compared with 1933. Concurrently with scarlet fever, diphtheria has been prevalent for several years and, although there was a slight rise in the number of cases in 1934, there are now indications that the epidemic has spent itself. The numbers of cases and deaths during the past ten years have been as follows :—

Year.	Cases.	Deaths.
1925	200	13
1926	244	16
1927	344	15
1928	487	16
1929	735	30
1930	731	29
1931	589	24
1932	493	10
1933	476	19
1934	520	21

Active Immunization against Diphtheria.—Active immunization as a preventive measure against diphtheria was commenced in Cardiff in 1926 and since then has been continuously advocated.

In 1930 the whole of the elementary school population were offered immunization following on a high incidence of diphtheria, the result being that slightly less than 8,000 children were anterior Schick tested and rather more than 4,000 received prophylactic treatment. During 1931 and 1932, the numbers of children inoculated showed a marked fall, only 171 and 51 respectively being dealt with. There was an improvement in 1933, when over 700 children were inoculated.

For the year under consideration the most noteworthy feature in connection with diphtheria immunization has been the gratifying increase of the number of parents requesting to have their children protected. Six hundred and one children under 5 years and 1,468 over 5 years received a complete course of prophylactic inoculations. It is especially satisfactory that the number of children under the age of 5 years has increased so substantially as, in order that the maximum good may be obtained from this preventive measure, a large proportion of the child population from 1-5 years must be protected.

Another feature of interest during the year has been the change of material used for the purpose of immunization. Formerly Toxoid Antitoxin Mixture (T.A.M.) was used exclusively, whereas the substance now being used is Toxoid Antitoxin Floccules (T.A.F.). The latter has the advantage of securing a higher percentage of immunes and also of being more rapid in producing immunity. The number of local and general reactions following its use is also considerably less than those with other prophylactics at present obtainable.

Details of the work carried out in connection with active immunization during the year are set out in the following table :—

Persons	Subjected to Anterior Schick Test			Inoculated* but not subjected to Anterior Schick Test	Total Number Inoculated*	Failed to attend for Completion of Inoculation
	Number	Positive	Inoculated*			
Under 5 years	184	95	89	512	601	43
5 years and upwards	1,682	445	430	1,038	1,468	80
Totals	1,866	540	519	1,550	2,069	123

* Complete course of injections.

A very interesting comparison has also been prepared showing the incidence of diphtheria among the immunized and non-immunized children up to 15 years of age (see next page). The year 1930 was chosen for commencing the record, as previously the numbers immunized did not represent a significant proportion of the population. Careful scrutiny of these figures shows the definite advantage of prophylactic treatment. At the same time, it is realized that no course of prophylactic inoculations is complete without the final control of a negative posterior Schick test, and steps are being taken, as far as possible, to secure this in future in the case of all who are inoculated.

Diphtheria in Children aged 0-15 Years.

Year	Immunized*						Non-Immunized						
	Approximate number of Children Immunized* or Anterior Schick Negative	Number of Cases Notified as Diphtheria	True Cases of Diphtheria				Number of Cases Notified as Diphtheria	Approximate number of Non-immunized Children	True Cases of Diphtheria				
			Number of Cases	Attack-rate per 1,000	Number of Deaths	Death-rate per 1,000			Case Mortality per cent.	Number of Cases	Attack-rate per 1,000	Number of Deaths	Death-rate per 1,000	Case Mortality per cent.
1930	3,500	54	28	8.00	...	...	549	53,240	505	9.48	28	0.52	5.54
1931	7,500	58	34	4.53	2†	0.27	437	49,240	381	7.74	20	0.41	5.25
1932	7,650	46	25	3.27	...	...	361	49,090	343	6.99	10	0.20	2.91
1933	7,700	36	20	2.60	...	...	356	49,040	321	6.54	18	0.37	5.61
1934	8,400	41	29	3.45	...	...	421	48,340	407	8.42	20	0.41	4.91

* Completed course of injections but not necessarily subjected to posterior Schick test.

† I was subjected to anterior Schick test and found negative; the other received three injections of protective material but was not subjected to posterior Schick test.

Enteric Fever.—Three cases of enteric fever were notified, and one death was registered as being due to the disease. The numbers of cases and deaths during the years 1925-1934 have been as follows :—

<i>Year.</i>		<i>Cases.</i>		<i>Deaths.</i>
1925	....	5	....	2
1926	....	9	....	2
1927	....	6	....	4
1928	....	2	....	2
1929	....	18	....	4
1930	....	11	....	—
1931	....	8	....	1
1932	....	8	....	2
1933	....	4	....	1
1934	....	3	....	1

Ophthalmia Neonatorum.—Thirty-three cases of ophthalmia neonatorum were notified, 18 of which occurred in institutions. Of the remaining 15 cases, 8 were treated by private medical practitioners, 5 by nurses of the Queen's Institute of District Nursing and 1 at the out-patient department of the Cardiff Royal Infirmary; the other case was admitted to the City Lodge Hospital. Four of the cases that occurred in institutions were also treated by nurses of the Queen's Institute of District Nursing after discharge from the institutions. One death was registered as having been due to the disease. Two of the cases removed from Cardiff before the result of treatment was ascertained. In the other 30 instances the vision of the infants was unimpaired, a complete cure having been effected in every case.

Food Poisoning.—Cases of food poisoning are notifiable under a local Act, but no cases were formally notified during the year. Several suspected cases, however, came to the knowledge of the department, which on investigation were found not to be due to food poisoning organisms.

VI.—NON-NOTIFIABLE INFECTIOUS DISEASES.

Measles.—An epidemic of measles occurred during February to June, 1934, and further cases occurred in December. The number of deaths due to the disease was 8, corresponding to a death-rate of 0·03 per 1,000 of the population, compared with 32 deaths and a death-rate of 0·14 in 1933. The number of deaths and the death-rate from measles during the ten years 1925-1934 were as follows :—

<i>Year.</i>		<i>Deaths.</i>		<i>Death-rate per 1,000.</i>
1925	....	88	....	0·39
1926	....	10	....	0·04
1927	....	31	....	0·14
1928	....	21	....	0·09
1929	....	113	....	0·50
1930	....	8	....	0·03
1931	....	50	....	0·22
1932	....	10	....	0·04
1933	....	32	....	0·14
1934	....	8	....	0·03

Whooping Cough.—Fourteen deaths were registered during 1934 as being due to whooping cough, corresponding to a death-rate of 0·06 per 1,000. The following is a comparison of the number of deaths and the death-rate from this disease during the ten years 1925-1934 :—

<i>Year.</i>	<i>Deaths.</i>	<i>Death-rate per 1,000.</i>
1925	34	0·15
1926	19	0·08
1927	7	0·03
1928	28	0·12
1929	24	0·11
1930	22	0·10
1931	6	0·03
1932	24	0·11
1933	14	0·06
1934	14	0·06

Diarrhoea.—The number of deaths at all ages from diarrhoea, etc., during the year was 42, being equivalent to a death-rate of 0·19 per 1,000 of the population. Of these 42 deaths, 34 occurred amongst children under 2 years of age, corresponding to a death-rate of 9·7 per 1,000 births. During the ten years 1925-1934 the number of deaths from diarrhoea, etc., under 2 years and the death-rate per 1,000 births were as follows :—

<i>Year.</i>	<i>Deaths under 2 years.</i>	<i>Death-rate per 1,000 births.</i>
1925	70	15·0
1926	40	8·8
1927	34	8·3
1928	46	11·2
1929	44	11·2
1930	30	7·9
1931	29	7·7
1932	30	8·6
1933	30	8·7
1934	34	9·7

Influenza.—Influenza was not exceptionally prevalent during any part of the year, and the number of deaths due to the disease was unusually low, only 16 being registered. These 16 deaths were equivalent to a death-rate of 0·07 per 1,000 of the population, as compared with 141 deaths and a death-rate of 0·63 per 1,000 in 1933. Consequent upon the comparatively few deaths from influenza, the mortality from respiratory diseases was also low. The following table shows the numbers of deaths registered as being caused by influenza and respiratory diseases and the proportion of such deaths to the total number of deaths from all causes during the ten years 1925-1934 :—

<i>Year</i>	<i>Number of Deaths from</i>			<i>Proportion per cent. of Deaths from all Causes</i>
	<i>Influenza</i>	<i>Respiratory Diseases</i>	<i>Influenza and Respiratory Diseases</i>	
1925	59	475	534	18·3
1926	33	324	357	14·6
1927	107	532	639	22·4
1928	42	389	431	16·2
1929	89	425	514	17·6
1930	23	292	315	12·4
1931	60	379	439	15·3
1932	57	287	344	12·3
1933	141	354	495	16·4
1934	16	245	261	9·6

Home Nursing of Pneumonia.—The following is a summary of the work done during 1934 by nurses of the Queen's Institute of District Nursing in connection with the arrangement whereby the Institute undertakes the home nursing of cases of pneumonia :—

Cases in hand at beginning of year	....	4
Cases referred for nursing during the year		92
Visits made during the year	....	1,329
Cases in hand at end of year	....	3

VII.—CARDIFF ISOLATION HOSPITAL.

In February, 1930, the Health Committee commenced consideration of the question of certain extensions of the Isolation Hospital. The extensions became necessary owing to the dilapidated condition of the old temporary buildings, which were constructed in 1892 and which were used as an isolation hospital pending the provision of permanent buildings. Other reasons for the extensions were the inadequate accommodation for the nursing and domestic staffs and the need for an operating theatre. After protracted consideration and negotiations, it was definitely decided in July, 1931, to proceed with the extensions. Unfortunately, further delay, due to modifications of the scheme and to several other reasons, occurred before the work was commenced. Ultimately, in April, 1933, the City Council accepted a tender for the construction of the buildings.

The extensions, which were completed in 1934, consist of a nurses' home, with accommodation for 58 members of the nursing staff, an operating theatre, and an observation ward for 26 beds (18 in single rooms and 8 in 2 four-bed wards). The total cost of the extensions was approximately £28,070 (including about £1,950 for furnishing and equipment.)

For many years the living accommodation for the nursing and domestic staffs had been inadequate, and now that a new home has been provided for the nurses, the living accommodation in the administrative block is used mainly by the domestic staff.

As previously mentioned, the old temporary buildings, which were erected over 42 years ago, are in a very dilapidated condition, and it is hoped that, with the addition of the new observation ward, it will be unnecessary again to bring them into use, although, even now, the accommodation at the hospital (149 adult beds) falls short of requirements during periods of exceptional prevalence of infectious disease. A minimum allowance of one bed per 1,000 of the population has long been accepted as the standard, and such an allowance would set the requirements for Cardiff at 221 beds.

Cases of the following diseases are admitted to the hospital when accommodation is available :—Enteric fever, scarlet fever, diphtheria, cerebro-spinal fever, epidemic encephalitis, measles, acute poliomyelitis, puerperal fever and puerperal pyrexia, and cases of whooping cough, chickenpox, mumps and other minor infectious diseases from public institutions.

The number of patients admitted to hospital, the average daily number of patients under treatment, the number of patient-days and the average duration of residence of the patients admitted are shown in the following table :—

Disease according to Diagnosis after Admission	Patients Admitted	Average Daily Number of Patients	Patient-days	Average Duration of Residence in days
Scarlet Fever	439	67	20,489	47
Diphtheria	470	83	31,416	67
Other Diseases	242	13	8,055	33
All Diseases	1,151	163	59,960	52

Report for 1934 of G. Emrys Harries, M.B., B.S. (Lond.), D.P.H., Medical Superintendent of the Cardiff Isolation Hospital.

During the year there were admitted to the wards 1,151 patients. With the exception of pavilion 7, which was temporarily closed for two months in the summer for the alteration of the heating system, all the permanent buildings were in full use during the whole of the year. Caerau Hospital, which had been used for the reception of scarlet fever cases and diphtheria carriers, was closed for the reception of patients on 21st October. On 15th November the new isolation block, with 18 separate cubicles and two small wards, each with accommodation for four patients, was opened for the reception of patients, and on the same day the new nurses' home and the operating theatre attached to pavilion 3 were also formally opened by the Lord Mayor (Alderman John Donovan, C.B.E., J.P.).

Staff.—Dr. Chris. J. McSweeney ceased duty as Medical Superintendent on 31st August, and left to take up a new appointment as Medical Superintendent of the Cork Street Fever Hospital, Dublin. On 17th September I commenced my duties as Medical Superintendent. On 1st October Dr. Jean W. Smellie, who had been engaged as Resident Medical Officer, was transferred to the Public Health Department as an Assistant Medical Officer. Dr. J. D. Spillane, who commenced duties as Assistant Resident Medical Officer on 23rd April, resigned on 22nd November, and was succeeded on the same day by Dr. D. J. N. McNab.

The health of the nursing and domestic staff was generally satisfactory. Two nurses contracted diphtheria and three scarlet fever. Twenty-two nurses developed other conditions—mainly mild attacks of tonsillitis. Two maids developed diphtheria, three scarlet fever and eleven others suffered from various mild illnesses. Forty-two members of the staff were Schick tested, and nine who were ascertained to be susceptible were immunized* against diphtheria, while thirty-nine were Dick tested, and five were immunized* against scarlet fever.

The usual lectures and tutorials were given during the year. Twelve nurses sat the Preliminary State Examination and all passed, while 16 passed the Final Examination, only one failing.

Scarlet Fever.—Four hundred and fifty-two cases were admitted to the wards, of whom 439 were true cases of scarlet fever. Twelve of the others suffered from a variety of adventitious rashes and made satisfactory recoveries, whilst the remaining patient was in reality found to be suffering from diphtheria and also made a satisfactory recovery. Thirty-two of the true cases of scarlet fever suffered concurrently from other diseases, mainly measles, chickenpox or diphtheria.

The type of scarlet fever prevailing was mainly mild, being even less severe than in the two previous years. Of the 439 cases, 423 were finally classified as simple, 12 as septic or sub-septic and four as toxic or sub-toxic. One hundred and eighty-one cases received doses (10 c.c. or more) of scarlatinal antitoxin.

The principal complications met with were as follows :—

<i>Complication.</i>	<i>Cases.</i>	<i>Percentage.</i>
Arthritis	13	2.96
Adenitis	85	19.36
Otorrhoea	41	9.33
Rhinitis (septic and diphtheritic)	75	17.08
Nephritis	4	0.91
Conjunctivitis	1	0.22
Tonsillitis	13	2.96
Quinsy	1	0.22

* Completed full course of prophylactic injections and subsequently reacted negatively to skin (Schick or Dick) tests.

Albuminuria	....	....	....	50	....	11.39
Epistaxis	....	....	....	8	....	1.82
Diphtheria	....	....	....	7	....	1.59
Bronchitis	....	....	....	1	....	0.22
Otalgia	....	....	....	7	....	1.59
Blepharitis	....	....	....	1	....	0.22
Herpes zoster	....	....	....	1	....	0.22
Enteritis	....	....	....	2	....	0.45
Colitis	....	....	....	1	....	0.22
Rheumatism	....	....	....	4	....	0.91

Four of the scarlet fever patients died. Death was attributed respectively to (1) scarlet fever and empyema following lobar pneumonia (present on admission) and scarlatinal nephritis, (2) scarlet fever and subsequent broncho-pneumonia, (3) septic scarlet fever and broncho-pneumonia and (4) scarlet fever and haematemesis. Classifying all four deaths to scarlet fever, the hospital mortality was 0.91 per cent.

Diphtheria.—Five hundred and fifty-eight cases were admitted to the wards, of whom 470 were true cases of diphtheria, 35 were carriers, while the remaining 53 suffered from various non-diphtheritic conditions. Of the latter group, the majority suffered merely from a variety of septic and other throat conditions, 39 of these being either tonsillitis or quinsy. One was in reality suffering from measles and broncho-pneumonia, and there was one case of each of the following conditions:—Appendicitis, cervical abscess, stridulous laryngitis, stomatitis, Ludwig's angina, broncho-pneumonia, broncho-pneumonia and retropharyngeal abscess, and one with no disease detected. The four remaining cases, notified as diphtheria, were in reality suffering from scarlet fever. Two deaths occurred in this group of 53 cases, one being the case of broncho-pneumonia and retropharyngeal abscess and the other Ludwig's angina.

There were 21 deaths among the 470 true cases of diphtheria, giving a case mortality of 4.47 per cent. Death in 18 cases was attributable to toxæmia and early heart failure, while the causes of death in the remaining three cases were (1) heart failure and pharyngeal paresis, (2) pharyngeal and diaphragmatic paresis, and (3) broncho-pneumonia following measles with concurrent diphtheria.

Table showing Type of Diphtheria and Mortality :—

Type	Number	Died	Mortality per cent.
Faucial	337	5	1.48
Faucial and nasal	88	15	17.04
Faucial and laryngeal	5	....	....
Laryngeal only	5	....	....
Nasal only	28	....	....
Nasal and aural	1	....	....
Aural only	1	....	....
Laryngeal, faucial and nasal	4	1	25.00
Vaginal	1	....	....
Totals	470	21	4.47

The above table shows, amongst other things, that the diphtheria mortality rate for the year was 4.47 per cent., as compared with 3.44 per cent. in 1933, 2.3 per cent. in 1932, 4.05 per cent. in 1931, 4.35 per cent. in 1930, 3.58 per cent. in 1929, 3.38 per cent. in 1928 and 4.82 per cent. in 1927.

Of the 14 cases suffering from croup, five were cases of pure laryngeal diphtheria, five had combined faucial and laryngeal lesions, and four laryngeal, faucial and nasal. Only one of these cases proved fatal. The hospital mortality among the laryngeal diphtheria cases was therefore 7·14 per cent.

Types of post-diphtheritic paralysis :—

<i>Type.</i>	<i>Number.</i>
Palatal paresis	39
Pharyngeal paralysis	11
Paralysis of neck muscles	15
Ciliary paresis	3
Paralysis of diaphragm	1
Facial paralysis	3
Intercostal muscle paralysis	1
Total	73

Forty-two patients in all suffered from paralysis. The paralysis rate was therefore 8·9 per cent., as compared with 6·1 per cent. in 1933, 5·1 per cent. in 1932, 6·8 per cent. in 1931, 6·2 per cent. in 1930, 9·3 per cent. in 1929, 8·8 per cent. in 1928 and 6·9 per cent. in 1927.

Table showing Diphtheria Death-rate according to the Day of Disease on which Serum was given :—

Day of Disease on which Serum given	Number of Patients	Number of Deaths	Number of Deaths per cent.
1st	15	...	...
2nd	88	3	3·41
3rd	137	6	4·38
4th	90	4	4·44
5th	59	7	11·86
Later than 5th	78	1	1·28
No Serum given	3	...	...
Totals	470	21	4·47

Of the patients who died, seven were under 5 years, 13 were in the 5-10 years group, and the other death occurred in a patient of 21 years.

For several years clinical diphtheria in Cardiff has been mild in character, and no case had been considered sufficiently grave to warrant intravenous serum therapy. However, with the advent in Cardiff of the severe type of diphtheria towards the end of the year—at the onset simulating a bilateral quinsy with the formation of a snail-track membrane—all these cases were treated with massive intravenous therapy, preceded at a four-hourly interval with a large dose of serum intramuscularly. In addition, this oedematous type of diphtheria received 10 to 20 c.c. of scarlatinal antitoxin.

As a result of these measures, and particularly owing to the early notification of diphtheria, consequent upon active propaganda by the Medical Officer of Health, deaths from diphtheria were kept at a comparatively low figure.

It is noteworthy that in no case where immunization had been completed was the clinical diphtheria otherwise than of mild character.

Measles.—Thirty-four patients were admitted to hospital as cases of measles, all proving to be true cases of the disease. Two cases intimated as scarlet fever and one as diphtheria which proved to be cases of measles are referred to in the appropriate sections of this report. Of the 34 cases of measles, four died, two from broncho-pneumonia, one from dysenteric enteritis (Flexner) and one from post-diphtheritic paralysis of diaphragm. One was 1 year of age, one 2 years, one 3 years and one 4 years. The hospital mortality was therefore 11·76 per cent.

The principal complications met with were:—

Laryngitis	.....	1
Broncho-pneumonia	.....	10
Otorrhoea	.....	3
Adenitis	.....	2
Rhinitis	.....	1
Stomatitis	.....	1
Blepharitis	.....	3
Albuminuria	.....	3
Post-diphtheritic paralysis	.....	1
Diphtheria	.....	1
Dysentery	.....	5

Enteric Fever.—Four cases were admitted as likely to be suffering from enteric infection. Three of these proved to be true cases of enteric fever, two being cases of infection with *Bacillus Typhosus* and one with *Para-Typhosus B*. The fourth case proved to be dyschesia. One death occurred amongst these patients—a case of infection with *Bacillus Typhosus*. The patient was a man of 26 years who died from perforation on the seventeenth day of the disease, the perforation being confirmed by autopsy.

Bacillary Dysentery.—Eight cases were admitted as likely to be suffering from this disease. All suffered from enteritis, but only in five cases was a diagnosis of bacillary dysentery confirmed, the organism isolated being *Bacillus Dysentery Flexner W*. No deaths occurred amongst these patients.

Erysipelas.—Twenty-four patients were admitted as cases of erysipelas, all proving to be true cases of the disease. Twenty-two of these were facial erysipelas and two erysipelas of the arm. One death occurred in a man of 59 years, who died from pyæmia, the death-rate for erysipelas thus being 4·17 per cent.

Cerebro-Spinal Meningitis.—Eleven cases were admitted as possible cases of this disease, but only in four instances was the diagnosis confirmed. These received large doses of polyvalent serum, both intramuscularly and intrathecally. The respective ages of those who recovered was 14 months, 5 years and 16 years. The age of the fatal case was 1 year. The mortality rate was therefore 25 per cent. The remaining seven cases were finally diagnosed as follows:—Two tuberculous meningitis (fatal), one purulent meningitis bacillus coli communis (fatal), one sub-arachnoid hæmorrhage (fatal), one streptococcal septicaemia and broncho-pneumonia (confirmed by post-mortem examination), one mastoiditis and otitis media (transferred to Llandough Hospital) and one observation tumour of brain (also transferred to Llandough Hospital).

Mumps.—One case was admitted during the year, a women of 29 years who was suffering from bilateral parotitis. Recovery was uneventful.

Whooping Cough.—Fourteen patients were admitted as cases of this disease, all of whom, except two cases of bronchitis, proved to be suffering from the disease. Three of the true cases were complicated by broncho-pneumonia, resulting in the death of two patients, a child of 9 months and a girl of 4 years. Thus the death-rate amongst those who were ascertained to be suffering from whooping cough was 16·6 per cent.

Chickenpox.—Seven patients suffering from chickenpox were admitted from other institutions, and in six instances the diagnosis was confirmed. The remaining child was found to be suffering from psoriasis guttata.

Rubella.—The only case admitted with a diagnosis of rubella was found to be suffering not from this disease, but from broncho-pneumonia, and made an uneventful recovery.

Puerperal Fever and Pyrexia.—Seven cases were admitted during the year. Six were cases of puerperal toxæmia, the remaining case being one of septicaemia. All received large doses of scarlatinal antitoxin, ranging from 50 c.c. to 100 c.c., and in addition, with the exception of one case of toxæmia, they all received the Remington Hobbs treatment. All the cases made satisfactory recoveries.

Other Diseases.—In addition to the afore-mentioned diseases, there were admitted to the wards 30 patients who were finally classified as follows:—

Tonsillitis	....	....	....	10
Influenza	....	....	....	2
Lobar pneumonia	....	....	....	1
Nephritis	....	....	....	2
Gastro-enteritis	....	....	....	1
Sprained ankle	....	....	....	1
Common cold	....	....	....	1
Adenitis	....	....	....	1
Laryngitis	....	....	....	1
Convalescent appendicectomy	....	....	....	2
Burns	....	....	....	1
Inflammation of gums	....	....	....	1
Thrombosis phlebitis	....	....	....	1
Dermatitis	....	....	....	1
Post-operative debility	....	....	....	1
Nervous debility	....	....	....	1
Ischio-rectal abscess	....	....	....	1
Abscess in old mastoidectomy	....	....	....	1
Total	....	....	....	30

With the exception of the case of lobar pneumonia in an adult, the case of mastoiditis, which was a scarlet fever contact, and a case of food poisoning which proved to be gastro-enteritis, all the above-mentioned cases occurred amongst the nursing and domestic staff.

Schick and Dick Tests.—The following table shows the number of scarlet fever patients who were Schick tested and the number of diphtheria patients who were Dick tested during the year:—

	Number Positive	Number Negative	Totals	Percentage Positive
Schick Test	157	186	343	45.77
Dick Test	109	146	255	42.74

Active Immunization.—As in the year 1933, active immunization against diphtheria in all cases admitted to the hospital for conditions other than diphtheria was again carried out, the signed consent of the parent being obtained in each case. For this purpose, 343 true cases of scarlet fever were Schick tested, and, of these, 157 were found to be positive. Of these, 128 were completely immunized* while in hospital, and 6 were partially immunized, arrangements being made for the completion of the treatment of the latter group at the Public Health Clinics subsequent to discharge of the patients from hospital. In addition, 37 children suffering from other conditions were Schick tested, of whom 24 were found to be positive; 17 of these were completely immunized*, and 2 were partially immunized while in hospital.

Laboratory Work.—During the year, 2,754 bacteriological examinations of various kinds were conducted in the hospital laboratory. Although the specimens examined were mainly diphtheria swabs, they included cerebro-spinal fluids, urines, blood cultures, pus, etc. In addition to the foregoing, special bacteriological examinations, such as virulence tests were kindly carried out by Dr. W. Parry Morgan at the Cardiff and County Public Health Laboratory.

*Completed full course of prophylactic injections and subsequently reacted negatively to the Schick skin test for susceptibility to diphtheria.

VIII.—LORD PONTYPRIDD HOSPITAL (DULWICH HOUSE).

Lord Pontypridd Hospital, which is reserved for the treatment of acute rheumatic conditions in children, is under the supervision of Dr. Cecil W. Anderson.

Twenty patients were in hospital on 31st December, 1933, and 128 were admitted during 1934. The number discharged was 123, leaving 25 patients in hospital on 31st December, 1934. No deaths occurred at the hospital during the year. Seven cases were not treated to a conclusion, for the following reasons:—

Removed by parents against medical advice	....	1
Removed to Isolation Hospital—		
Diphtheria carriers	....	3
For observation-diphtheria	....	2
Scarlet fever	....	1
		—
Total	....	7
		—

The medical reasons for admission of the 128 cases were as follows:—

Chorea alone	....	4
Chorea and early carditis	....	39
Rheumatic pains alone	....	2
Rheumatic pains and early carditis	....	61
Early carditis alone	....	3
Chorea and valvular disease of heart	....	1
Rheumatic pains and valvular disease of heart	....	4
Valvular disease of heart alone	....	1
Rheumatic pains and chorea with early carditis	....	11
Arthritis and early carditis	....	2
		—
Total	....	128
		—

Of the 128 patients admitted, 52 were boys and 76 were girls, their ages varying from 3 years to 14 years.

The number of cases admitted each year since 1929, according to sex, is shown in the following table :—

Year	Boys	Girls	Totals
1929 ...	35	37	72
1930 ...	57	58	115
1931 ...	51	103	154
1932 ...	40	103	143
1933 ...	42	66	108
1934 ...	52	76	128
Totals	277	443	720

The condition of the heart on admission and discharge of the cases admitted and treated to a conclusion during 1934 is set out in the following table :—

Condition of Heart	On Admission	On Discharge
Normal	5	68
Minor cardiac manifestations	106	46
Major cardiac manifestations	10	7
Totals	121	121

The average period spent in hospital by the 121 cases who were treated to a conclusion was 76.7 days, *i.e.*, approximately 11 weeks.

The following table gives the condition of the heart on admission and discharge of all cases treated to a conclusion since the opening of the hospital in April, 1929 :—

Years	Condition of Heart			Total
	Normal	Minor Cardiac Manifestations	Major Cardiac Manifestations	
1929-34				
On admission	53	534	93	680
On discharge	425	174	81	

The sedimentation tests carried out in the hospital during 1934 numbered 479.

In connection with active immunization against diphtheria, 101 children were Schick tested, of whom 49 were found to be positive. These 49 children were each given three injections of prophylactic; 23 of them were subsequently subjected to the posterior Schick test and found to be negative. Arrangements were made for the remaining 26 to receive the posterior Schick test at the special immunization clinics on discharge from hospital.

The following is a record of the supervisory work carried out during the year :—

Cases remaining under supervision at beginning of year	...	1,467
New cases attending	....	479
Cases discharged from supervision on attaining 14 years of age	....	172
Other cases who ceased to be supervised :—		
Left Cardiff	....	12
Died	....	3
Discharged (not suffering from rheumatism)	....	43
Ceased to attend	....	29
	-----	259
Cases remaining under supervision at end of year	....	1,687
Total attendances :—		
At routine Rheumatism Clinics	....	2,919
At Out-patient Department of Lord Pontypridd Hospital	....	162
Routine clinic sessions held	....	183
Out-patient clinic sessions held	....	45
Average attendance at routine clinic sessions	....	15.9
Average number of new cases at routine clinic sessions	....	2.6
Average attendance at Out-patient Department	....	3.6

The following table shows the condition of the heart in the 172 cases that ceased to remain under supervision because of attaining the age of 14 years :—

	On Ascertainment	On Discharge
Normal	69	107
Minor heart manifestations	86	44
Major heart manifestations	17	21
Totals	172	172

The types of heart disease present in the 21 cases having major heart manifestations were as follows :—

Mitral regurgitation	....	11
Mitral stenosis	....	7
Aortic regurgitation	....	3
Total	....	21

IX.—LLANDOUGH HOSPITAL.

Report for 1934 of David G. Morgan, M.R.C.S., L.R.C.P., Medical Superintendent of Llandough Hospital.

WORK OF THE HOSPITAL.

The first year in the life of a hospital is a difficult one. So many things can only be settled in the light of experience, and the establishment of tradition and precedent during this vital period depends mainly on its administrators. Prior to 1st January, 1934, the hospital had only been in existence for the admission of cases for two months, so that the work of getting it into "running order" has necessitated much diligence and loyalty on the part of each member of the staff.

A perusal of the statistics given in this report will show that the hospital has been very active. It has been noted that there is an increasing demand for the beds and, in future, it is likely that the hospital, with its present accommodation, will have a substantial waiting list. During the year under review, however, the hospital was able to cope with the demand for its beds.

Every patient, other than in emergency, is examined by a member of the senior resident medical staff before admission is sanctioned. Four sessions weekly are held at the City Lodge Hospital for this purpose. This ensures the admission of only the type of patient to whom the hospital can be of greatest value.

Letters were sent to practically all medical practitioners on the discharge of their patients. These letters contained particulars of any investigations made, operations performed and of treatment given and advised. This service is much appreciated.

During the year, a large number of official bodies and persons from many parts of the world visited the hospital, and invariably they expressed appreciation of its site, construction and equipment.

I would like to thank Dr. J. Nissen Deacon, Medical Superintendent of the Redhill County Hospital, Edgware, Middlesex, for permission generally to follow the format of his comprehensive annual reports.

STAFF.

The names of the principal members of the medical and other staff of the hospital are set out on page viii. The nursing staff, in addition to the matron, consists of 30 trained nurses, 75 probationer nurses, 1 male nurse and 1 radiographer-masseuse.

NURSES' TRAINING SCHOOL.

From October, 1933, until December, 1934, 79 nurses of varying degrees have entered for training, a number being transferred from the City Lodge Hospital and 3 from an affiliated training school (The Aberystwyth Infirmary and Cardiganshire General Hospital).

After a trial period of three months, probationer nurses proceed to a three-years' course of training, on completion of which they are required to sit the Hospital Examination and the Final State Examination for admission to the general part of the State Register for Nurses. Based on the results of the Hospital Examination, nurses who so desire are accepted for training for the certificate in midwifery granted by the Central Midwives Board. All student midwives take their training in the Maternity Department of the City Lodge Hospital, which is approved by the Central Midwives Board as a training school for midwives.

Examination Successes during 1934 :—

	<i>Passed.</i>	<i>Failed.</i>
Hospital Final Examination	.... 3	—
Final State Examination	.... 8	—
Certificate of Central Midwives Board*	4	—

SOCIAL SERVICE DEPARTMENT.

The Social Service Department was opened on 26th February, 1934, and is in charge of a Lady Almoner, whose chief duties are as follows :—To interview patients on admission and discharge and to assess them according to means for the repayment of the cost of maintenance and treatment. In this connection, the Almoner has also, as far as possible, to collect at the hospital payments for maintenance and treatment.

Cases are admitted from the Administrative County of Glamorgan either on Relieving Officers' Orders or as patients paying the full rate.

Owing to continued trade depression and the effects of unemployment, approximately one-third of the patients admitted from Cardiff were unable to make any payment for treatment. The total amount of money collected during the period was £1,947 3s. 7d.

It has been possible to inaugurate a voluntary motor transport service for necessitous cases needing conveyance to their homes on discharge. The Cardiff Rotarians and their friends have made this service possible.

The department also has a Samaritan fund, the income of which is derived from gifts and from money collected in two boxes placed in the hospital on visiting days. The fund is put mainly to the following uses :—(1) Temporary assistance in destitute cases for 'bus fares or food ; (2) assistance for necessitous patients on discharge to purchase medical requisites and surgical appliances.

TIME-TABLE OF CONSULTANTS' ATTENDANCES AND ADMISSION CLINICS.

Monday	a.m.	Mr. D. J. Harries, Surgeon. Dr. W. Parry Morgan, Bacteriologist. Dr. T. Garfield Evans, Radiologist.
	p.m.	Admission department open for medical cases and Asthma Clinic (Dr. D. A. Williams).
Tuesday	a.m.	Dr. A. A. Prichard, Aural Surgeon. Dr. A. G. Watkins, Physician for Diseases of Children. Dr. T. Garfield Evans, Radiologist.
	p.m.	Professor A. M. Kennedy, Physician. Mr. D. J. Harries, Surgeon. Dr. H. G. Greaves, Anaesthetist. Admission department open for surgical cases (Dr. G. H. Garfield).
Wednesday	a.m.	Professor A. M. Kennedy, Physician.
	p.m.	Professor G. I. Strachan, Gynaecologist.
Thursday	a.m.	Mr. D. J. Harries, Surgeon. Dr. T. Garfield Evans, Radiologist.
	p.m.	Mr. R. D. Owen, Aural Surgeon. Dr. H. G. Greaves, Anaesthetist. Admission department open for medical cases (Dr. D. A. Williams).
Friday	a.m.	Professor A. M. Kennedy, Physician.
	p.m.	Dr. A. G. Watkins, Physician for Diseases of Children. Mr. D. J. Harries, Surgeon. Mr. W. E. Hallinan, Dentist. Admission department open for surgical cases (Dr. G. H. Garfield.)
Saturday	a.m.	Professor G. I. Strachan, Gynaecologist. Dr. H. G. Greaves, Anaesthetist.

In addition to the regular attendances of the Professor of Medicine, frequent visits are made by his assistants from the Welsh National School of Medicine.

The Professor of Pathology or his assistants attend when required.

STATISTICS.

BEDS.

Male	....	Medical	....	....	68	130
		Surgical	....	....	62	
Female	....	Medical	....	....	68	136
		Surgical	....	....	34	
		Gynaecological	....	....	34	
Children	....	General	....	....	70	79
		Ear, Nose and Throat	....	....	9	
Total					....	345

Beds—

Average daily complement	....	....	345	
Average daily number available	....	....	343	
Average daily number occupied	....	....	292	
Average daily percentage occupied	....	....	85	
Average length of stay of patients—days	....	....	28.5	
Average number of patients per occupied bed per annum	....	....	12.8	
Average number of admissions daily	....	....	10.2	
Nursing staff—average strength daily	....	....	102	
Average number of occupied beds per nurse	....	....	2.9	
Maximum number of beds occupied	....	....	334	on 20th and 23rd April, 1934.
Minimum number of beds occupied	....	....	241	on 3rd September, 1934.

PATIENTS.

Patients in Hospital on 1st January, 1934	....	....	....	269	
Admitted	....	....	....	3,722	3,991
Discharged	....	....	....	3,451	
Died	....	....	....	289	3,740
Patients treated to a conclusion	....	....	....	—
Patients in Hospital on 31st December, 1934	....	....	....	251	
Patients admitted from City of Cardiff	....	....	....	3,312	
Patients admitted from Administrative County of Glamorgan and other areas	....	....	....	410	
Patients discharged in the normal manner	....	....	....	3,391	
Patients discharged against medical advice	....	....	....	60	
Deaths	....	....	....	289	
Total	....	....	....	3,740	

Patients discharged to :—

Their own or relatives' homes	....	....	....	3,072	
Cardiff Public Assistance Institution	....	....	....	329	
Other institutions or hospitals	....	....	....	50	
Deaths	....	....	....	289	
Total	....	....	....	3,740	

Classification of Patients treated to a Conclusion.

Male patients :—					
Under 2 years	....	....	....	....	85
Over 2 and under 16 years	....	....	....	....	440
Over 16 years	....	....	....	....	1,314
					1,839
Female patients :—					
Under 2 years	....	....	....	....	63
Over 2 and under 16 years	....	....	....	....	399
Over 16 years	....	....	....	....	1,439
					1,901
Total					3,740

Results of Treatment or the Termination.

	Number.	Percentage.
Cured	2,193	58·6
Improved	1,010	27·0
No change	241	6·5
Worse	7	0·2
Died	289	7·7

Analysis of Deaths.

Age at Death—Years	Males	Females	Totals	Percentage of Total
Under 1 year	13	10	23	8·0
1 — 2	2	3	5	1·7
2 — 5	3	3	6	2·1
5 — 15	6	7	13	4·4
15 — 25	6	13	19	6·6
25 — 35	13	10	23	8·0
35 — 45	14	10	24	8·3
45 — 55	27	22	49	17·0
55 — 65	45	19	64	22·1
65 — 75	29	20	49	17·0
Over 75	10	4	14	4·8
Totals	168	121	289	100·0

	Treated	Percentage of Total	Died	Case Mortality per cent.
Medical Cases	1,404	38	168	12·0
Surgical and Gynaecological	2,336	62	121	5·2

	Number.	Percentage of Total.
Deaths within 24 hours of admission	40	13·8
Deaths 24 to 48 hours after admission	19	6·6
Deaths 48 to 72 hours after admission	15	5·2
All other deaths	215	74·4
Total deaths	289	100·0
Number of inquests	19	

Classification of the Diseases and Conditions for which the 3,740 discharged patients were primarily treated.

	Males		Females		Totals
	Discharged	Died	Discharged	Died	
Diseases due to Infection :—					
Erysipelas	7	....	7	2	16
Influenza	8	....	12	....	20
Meningococcal infection .....	....	1	1	1	3
Pneumococcal infection—Lungs	41	10	21	3	75
Miscellaneous .....	....	....	....	2	2
Rheumatic Fever—Acute with carditis	5	1	7	....	13
Acute without carditis	6	....	5	....	11
Sub-acute with carditis	14	....	21	2	37
Sub-acute without carditis	9	....	11	....	20
Chorea with carditis	5	....	18	....	23
Chorea without carditis	5	....	10	....	15
Syphilis (congenital, primary, secondary)	2	....	1	....	3
Tuberculosis—Lungs	21	3	12	1	37
Other sites of respiratory system	1	....	1	....	2
Brain and meninges .....	....	4	....	4	8
Intestines and peritoneum	2	....	3	2	7
Genito-urinary	1	1	2	1	5
Bones and joints	8	....	1	....	9
Glands	10	....	6	....	16
Miscellaneous	1	....	....	....	1
Miscellaneous	9	2	13	2	26
Infestation by Metazoan Parasites .....	....	....	2	....	2
Diseases of the Nervous System :—					
Peripheral neuritis, sciatica, neuralgia	9	....	5	....	14
Tabes dorsalis	12	2	5	....	19
Disseminated sclerosis	1	1	1	....	3
Other diseases of the spinal cord	3	1	....	1	5
Inflammation of cerebral meninges .....	....	1	....	....	1
General paralysis of the insane and syphilis of the meninges	5	....	6	....	11
Inflammation and abscess of brain	1	....	....	....	1
Paralysis agitans .....	....	....	....	1	1
Haemorrhage, embolism and thrombosis of cerebral meninges	8	7	3	8	26
Injuries of brain	14	....	7	....	21
Epilepsy	8	....	6	....	14
Mental deficiency	6	....	2	....	8
Mental diseases	4	....	2	....	6
Psycho-neuroses	32	....	56	....	88
Other diseases of the nervous system	1	....	3	....	4
Diseases of the Eye	2	....	2	....	4
Diseases of the Ear :—					
Diseases of the middle ear, including antrum	8	....	....	....	8
Diseases of the mastoid process	5	2	11	1	19
Otitis media	10	....	6	....	16
Other diseases of the ear	7	....	....	....	7
Diseases of the Nose :—					
Inflammation of mucous membrane	6	....	8	....	14
Diseases of the septum nasi	10	....	1	....	11
Diseases of the accessory sinuses	12	....	8	....	20
Other conditions	6	....	9	....	15
Diseases of the Circulatory System :—					
Diseases of the endocardium .....	....	....	....	2	2
Mitral stenosis and mitral regurgitation	7	....	8	1	16
Aortic stenosis and aortic regurgitation	12	5	1	2	20
Diseases of the myocardium	11	7	6	4	28
Heart block	1	....	....	....	1

	Males		Females		Totals
	Discharged	Died	Discharged	Died	
Diseases of the Circulatory System—cont.					
Auricular fibrillation	2	2	13	5	22
Arterio-sclerosis	23	5	9	1	38
Aneurysm and aortitis (syphilitic)	8	6	....	....	14
Thrombosis and embolism	3	2	1	1	7
Vasomotor disorders	5	....	4	1	10
Essential hypertension	1	....	7	....	8
Diseases of the veins	5	1	11	....	17
Diseases of Blood, Blood-forming Organs and Lymphatic System :—					
Purpura	3	....	....	....	3
Pernicious anaemia	4	1	9	2	16
Achlorhydric anaemia .....	....	....	7	....	7
Secondary anaemia	1	1	6	....	8
Leukaemia	1	1	....	....	2
Diseases of the lymphatic system	10	1	4	....	15
Diseases of the Endocrine Glands :—					
Exophthalmic goitre	1	....	5	....	6
Toxic adenoma	5	....	8	1	14
Goitre	1	....	3	....	4
Other conditions .....	....	....	3	....	3
Diseases of the Breast .....	....	....	1	....	1
Diseases of the Respiratory System :—					
Diseases of the larynx and pharynx	3	....	4	....	7
Bronchitis—Acute	11	....	7	....	18
Chronic	16	1	12	....	29
Bronchiectasis	6	....	7	....	13
Asthma—secondary	9	....	1	....	10
Broncho-pneumonia	14	2	22	7	45
Fibrosis of lung	7	....	4	....	11
Embolism and thrombosis of pulmonary arteries .....	....	....	....	1	1
Emphysema	6	....	....	....	6
Pleurisy and other diseases of the pleura	6	....	4	....	10
Empyema	4	....	4	....	8
Diseases of the Digestive System :—					
Diseases of the lips, mouth, jaws and palate	5	....	5	....	10
Tonsillitis and quinsy	11	1	25	....	37
Enlarged tonsils and/or adenoids	212	....	265	....	477
Gastritis	11	....	5	....	16
Enteritis and gastro-enteritis	10	1	8	1	20
Gastric ulcer	58	....	13	1	72
Gastric ulcer—perforated	8	5	1	....	14
Duodenal ulcer	14	....	1	....	15
Appendicitis—Acute	31	5	28	2	66
Sub-acute and chronic	32	....	51	1	84
Colitis	3	1	5	2	11
Hernia—Inguinal	129	....	19	....	148
Femoral	1	....	4	....	5
Umbilical and ventral	4	....	8	....	12
Miscellaneous	3	....	....	....	3
Strangulated	5	2	2	1	10
Intussusception .....	....	....	....	1	1
Volvulus	1	....	....	....	1
Visceroptosis .....	....	....	1	....	1
Diverticula of colon	5	....	....	....	5
Intestinal obstruction .....	....	2	1	....	3
Constipation	26	....	24	....	50
Ischio rectal abscess	20	....	6	....	26
Fistulae, including fissures of the anus	3	....	4	....	7
Haemorrhoids	37	....	14	....	51
Prolapse of rectum	2	....	3	....	5
Pancreatitis .....	....	....	1	....	1
Infective jaundice	4	....	5	1	10

	Males		Females		Totals
	Discharged	Died	Discharged	Died	
Diseases of the Digestive System— <i>cont.</i>					
Cholecystitis	2	....	6	....	8
Calculi of gall bladder	4	....	7	....	11
Adhesions following operation	10	....	2	....	12
Pyloric stenosis	1	....	....	....	1
Other conditions	1	....	1	1	3
Diseases due to Disorders of Nutrition or Metabolism :—					
Diabetes mellitus	11	1	18	31	33
Marasmus	11	7	3	3	24
Feeding difficulties	2	....	1	....	3
Asthma—allergic	13	....	26	....	39
Other allergic conditions	16	....	9	....	25
Rickets	2	....	3	....	5
Other metabolic diseases	1	1	....	....	2
Diseases of the Generative System :—					
Senile enlargement of the prostate	34	9	....	....	43
Other diseases of the male generative organs	59	1	....	....	60
Diseases of the ovary .....	....	....	4	....	4
Salpingitis .....	....	....	22	1	23
Diseases of the uterine ligaments and adjacent peritoneum .....	....	....	7	....	7
Metritis .....	....	....	7	....	7
Endometritis .....	....	....	60	....	60
Chronic inflammation of the cervix .....	....	....	72	....	72
Displacement of uterus .....	....	....	31	....	31
Diseases of vagina .....	....	....	10	....	10
Diseases of the vulva, clitoris and urethra .....	....	....	12	....	12
Dysmenorrhoea .....	....	....	9	....	9
Menorrhagia and metrorrhagia .....	....	....	12	....	12
Abortion .....	....	....	113	5	118
Mole .....	....	....	3	....	3
Sterility .....	....	....	5	....	5
Toxaemias of pregnancy .....	....	....	25	1	26
Dispareunia .....	....	....	1	....	1
Diseases of the Bones, Joints, Muscles and Fasciae :—					
Osteitis	2	1	5	....	8
Osteomyelitis—Acute and chronic	16	1	2	1	20
Arthritis—Acute	4	....	....	....	4
Chronic	8	....	15	....	23
Diseases of the spine	1	....	....	....	1
Rheumatoid arthritis	4	....	5	....	9
Diseases of the fasciae	5	....	4	....	9
Diseases of the tendons and sheaths of tendons	2	....	2	....	4
Diseases of the bursae	4	....	13	....	17
Displaced internal semilunar cartilage	8	1	2	....	11
Other diseases	5	....	3	....	8
Diseases of the Areolar Tissue and Skin :—					
Cellulitis	10	2	14	1	27
Boils, carbuncles or abscesses	40	2	23	2	67
Dermatitis, eczema or impetigo	2	....	5	1	8
Erythema nodosum	2	....	2	....	4
Diseases of the Urinary Organs :—					
Glomerulo-tubular nephritis—Acute and sub-acute	8	....	5	....	13
Chronic	3	10	3	8	24
Arterio-sclerotic kidney	4	3	2	3	12
Pyelonephritis and pyonephrosis .....	....	2	....	2	4
Pyelitis	6	....	28	....	34
Perinephritis and perinephric abscess	6	....	3	....	9
Renal calculus	17	....	3	....	20
Diseases of the ureter	1	....	....	....	1

	Males		Females		Totals
	Discharged	Died	Discharged	Died	
Diseases of the Urinary Organs— <i>cont.</i>					
Cystitis	3	1	2	.....	6
Vesical calculus	4	.....	.....	.....	4
Urinary disorders .....	.....	.....	2	.....	2
Injuries :—					
Burns and scalds	4	3	8	1	16
Poisoning .....	.....	.....	3	.....	3
Wounds and bruises	17	.....	8	.....	25
Multiple and miscellaneous injuries	10	2	4	1	17
Fractures—Skull	1	1	.....	.....	2
Bones of face and jaw	2	.....	.....	.....	2
Clavicle .....	.....	.....	1	.....	1
Humerus	2	.....	3	.....	5
Radius	3	.....	2	.....	5
Ulna and radius	2	.....	2	.....	4
Small bones of hand and wrist	1	.....	1	.....	2
Ribs	3	.....	1	.....	4
Pelvis	2	.....	.....	.....	2
Spine	1	.....	.....	.....	1
Femur	9	.....	14	.....	23
Tibia	7	.....	2	.....	9
Fibula	4	.....	1	.....	5
Tibia and fibula	5	.....	3	.....	8
Patella	2	.....	.....	.....	2
Small bones of foot	2	.....	.....	.....	2
Miscellaneous	1	.....	2	.....	3
Dislocations	6	1	3	.....	10
Tumours—Benign :—					
Nervous system	1	3	.....	.....	4
Thyroid glands .....	.....	.....	2	1	3
Breast .....	.....	.....	1	.....	1
Bones	3	.....	1	.....	4
Ovary and uterus .....	.....	.....	20	.....	20
Cervix .....	.....	.....	10	.....	10
Skin and muscle .....	.....	.....	4	.....	4
Bladder	1	.....	.....	.....	1
Tumours—Malignant :—					
Breast .....	.....	.....	8	1	9
Respiratory system	2	3	.....	1	6
Bones	2	.....	4	.....	6
Lips, mouth, tongue and fauces	6	.....	.....	.....	6
Pharynx, larynx and oesophagus	3	2	2	.....	7
Stomach .....	.....	8	3	2	13
Intestines	1	6	1	4	12
Rectum and anus	9	5	3	.....	17
Pancreas, liver and gall bladder	1	.....	.....	2	3
Male generative organs	5	1	.....	.....	6
Ovary and uterus .....	.....	.....	9	2	11
Cervix .....	.....	.....	10	1	11
Skin and muscle	5	.....	1	.....	6
Bladder	2	1	.....	.....	3
Miscellaneous regions	3	.....	2	2	7
Cysts	8	.....	8	.....	16
Lipoma .....	.....	.....	3	.....	3
Malformations	4	1	9	1	15
Miscellaneous :—					
Other diseases	42	1	33	1	77
No abnormality detected	11	.....	11	.....	22
Totals	1,671	168	1,780	121	3,740

Summary of Diseases and Conditions in Order of Frequency.

Diseases of the digestive system	....	....	....	....	672
Diseases of the eye, ear, nose and throat	....	....	....	....	638
Diseases of the generative organs	....	....	....	....	503
Diseases due to infection	....	....	....	....	351
Diseases of the circulatory system	....	....	....	....	234
Diseases of the nervous system	....	....	....	....	222
Tumours	....	....	....	....	189
Diseases of the respiratory system	....	....	....	....	158
Injuries	....	....	....	....	151
Diseases of the urinary organs	....	....	....	....	129
Diseases of the bones, joints, muscles, etc.	....	....	....	....	114
Diseases of the areolar tissue and skin	....	....	....	....	106
Other diseases	....	....	....	....	273

WORK OF DEPARTMENTS.

Pathological	....	Investigations	....	....	5,263
Surgical	....	Major operations	....	....	991
		Minor operations	....	....	928
Dental	....	Patients	....	....	115
		Attendances for treatment	....	....	180
Radiological	....	Patients investigated	....	....	1,222
		Number of investigations	....	....	2,193
Massage	....	Patients	....	....	63
		Treatments	....	....	974
Ultra-violet Light	....	Patients	....	....	64
		Treatments	....	....	581
Admission	....	Patients seen	....	....	1,222
Nurses' Sick Room	....	Number of admissions	....	....	47

PATHOLOGICAL DEPARTMENT.

Analysis of Investigations.

Pus—Stained smears for organisms	....	....	....	....	63
Cultures for organisms	....	....	....	....	4
Smears—Stained for gonococci	....	....	....	....	35
Blood—Counts (full)	....	....	....	....	595
Leucocyte counts	....	....	....	....	740
Platelet counts/reticulocyte counts	....	....	....	....	22
Coagulation bleeding time	....	....	....	....	2
Grouping	....	....	....	....	13
Chemical investigations	....	....	....	....	289
Culture for organisms	....	....	....	....	1
Cerebro-spinal fluid—various investigations	....	....	....	....	91
Pleural fluid—various investigations	....	....	....	....	18
Urine—Microscopy of centrifugal deposit	....	....	....	....	1,096
Bacteriological investigations	....	....	....	....	63
Chemical investigations	....	....	....	....	1,303
Fractional test meals	....	....	....	....	216
Sputum—Stained smears for tubercle bacilli	....	....	....	....	295
Faeces—Bacteriological investigations	....	....	....	....	24
For occult blood	....	....	....	....	15
Chemical investigations	....	....	....	....	15
Miscellaneous investigations	....	....	....	....	40
Pathological sections reported	260
Post-mortem examinations	48
Clinical photographs	15

Total	5,263
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In addition to the above investigations conducted at the Hospital Laboratory, the following investigations were carried out at the Cardiff and County Public Health Laboratory :—

Ear, nose and throat swabs—cultures for organisms.

Specimens of blood for Wassermann reaction.

ANALYSIS OF OPERATIONS PERFORMED.

	Major	Minor	Totals
On skin and superficial structures	13	102	115
On arteries, veins and lymphatics .. .	7	18	25
On nerves .. .	2	2	4
On bones and joints .. .	34	113	147
On muscles, tendons, bursae and fasciae .. .	9	6	15
Amputations .. .	10	5	15
On skull, brain and spine .. .	3	...	3
On mouth, pharynx and oesophagus .. .	9	12	21
On thyroid and accessory glands .. .	15	6	21
On breast .. .	4	8	12
On thorax and contents .. .	11	6	17
On abdominal wall and cavity .. .	376	3	379
On stomach and duodenum .. .	30	...	30
On intestines, rectum and anus .. .	71	46	117
On liver, gall bladder, pancreas and spleen .. .	11	...	11
On kidney and urinary tract .. .	60	6	66
On male generative organs .. .	27	72	99
On female generative organs .. .	249	51	300
On ear, nose and throat .. .	46	469	515
Unclassified .. .	4	3	7
Totals .. .	991	928	1,919

Operations performed by Consultant Staff .. . 1,045

Operations performed by Resident Medical Staff .. . 874

DENTAL DEPARTMENT.

Number of patients treated .. . 115

Attendances for treatment .. . 180

Attendances.

For extractions under general anaesthetic .. . 67

For extractions with local anaesthetic .. . 105

For extractions without anaesthetic .. . 2

For examinations without extractions .. . 6

Total .. . 180

Total number of teeth extracted .. . 589

RADIOLOGICAL DEPARTMENT.

Analysis of Investigations.

	Appearances		Totals	Percentage of Appearances Abnormal
	Normal	Abnormal		
Skull for injury	60	25	85	29.4
Skull and contents for disease or deformity	25	12	37	32.4
Lungs and mediastinum	56	183	239	76.6
Pleura and pleural conditions	7	17	24	70.8
Heart and aorta	8	44	52	84.6
Oesophagus, stomach and intestines	221	423	644	65.7
Biliary passages	42	6	48	12.5
Urinary system	194	90	284	31.7
Generative system		2	2	100.0
Bones and joints for injury	116	226	342	66.1
Bones and joints for disease or deformity	130	208	338	61.5
Miscellaneous—for foreign bodies, etc.	3	10	13	76.9
Dental	42	43	85	50.6
Totals	904	1,289	2,193	58.8

Special Methods of Investigation :—

Barium meals	198
Barium enemata	33
Cholecystograms	11
Lipiodol injections	15
Urograms—intravenous....	23
Screening the removal of a foreign body	4

Total	284
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Number of radiograms taken	2,193
Number of patients investigated	1,222
Average number of investigations per patient	1.8
Average number of investigations per discharged patient	0.59

MASSAGE AND LIGHT DEPARTMENT.

	Massage	Ultra-violet Light
Patients treated	63	64
Remaining under treatment on 31st December, 1934	2	3
Patients discharged from department	61	61
Number of treatments	974	581

	Number.	Percentage.
Medical massage cases	662	68
Surgical massage cases	312	32
Total	974	100

NURSES' SICK-ROOM.

Complement of nursing staff on 31st December, 1934	....	....	105
Average daily complement of nursing staff	....	....	102
Average daily complement of nurses available for duty	....	....	98
Nurses off duty sick during the year	....	....	39*
Nursing days lost (sick leave included)	....	....	1,074
Average number of nursing days lost per annum :—			
Per sick nurse	....	....	27.5
Per nurse of the average daily complement	....	....	10.5

* Four nurses off duty twice, 2 nurses off duty thrice, making 47 admissions to the nurses' sick room.

<i>Disabilities.</i>	<i>Number.</i>
Rheumatism	3
Ear, nose and throat conditions	21
Septic conditions of skin	3
Influenza	3
General debility	5
Bronchitis	2
Appendicitis	1*
Cardiac disease	1
Pulmonary tuberculosis	3
Surgical tuberculosis	1
Injuries	1
Scarlet fever	2†
Diphtheria	1†
Total	47

*Major operation.

†Transferred to Isolation Hospital.

X.—POOR LAW MEDICAL SERVICE.

The following table shows the numbers of attendances of patients at the surgeries of the district medical officers and the visits paid to the homes of patients by these officers during 1934 :—

Name of District	Whether Whole or Part-time D.M.O.	Attendances of Patients at Surgery.	Attendances of Patients at Surgery for Medicine only	Visits to Homes of Patients	Average number of individual Patients dealt with weekly
Roath	Whole-time	12,096	6,711	7,159	436
Central	do.	14,115	11,444	2,641	526
Canton	Part-time	3,079	131	990	72
South	do.	1,363	842	487	44
Splott*	do.	64	25	51	51
Adamsdown*	do.	55	35	39	56
Gabalfa ...	do.	924	405	477	31
Llanishen ...	do.	52	8	102	2
Totals	..	31,748	19,601	11,946	1,218

* Additional district constituted on 17th December, 1934.

The following tabular statements show the hospital provision and the work undertaken during 1934 in connection with the institutional treatment of the sick at the City Lodge and Ely Lodge Poor Law Institutions.

CITY LODGE.

(1) Classification of the accommodation for the sick and the number of beds occupied on 31st December, 1934 :—

Classification of Wards	Number of Wards	BEDS							
		Men		Women		Children (under 16 years)		Totals	
		Pro-vided	Occu-pied	Pro-vided	Occu-pied	Pro-vided	Occu-pied	Pro-vided	Occu-pied
Medical	3	} 24	24 {	28	20			} 78	68
Surgical	4			26	24	....	....
Chronic Sick	32	259	259	128	125			387	384
Children	2					40	29	40	29
Venereal Disease	2	10	5	7	4	4	1	21	10
Tuberculosis	3	54	46	24	21	....	....	78	67
Maternity	2			22	8			22	8
Mental Disease	2	5	1	5	1	....	....	10	2
Other	2	5	5	5	4	....	....	10	9
Totals	52	357	340	245	207	44	30	646	577

(2) In-patients :—

1. Total number of admissions (including infants born in hospital)	2,776
2. Number of women confined in hospital	220
3. Number of live births	193
4. Number of still-births	28
5. Number of deaths among the newly born	16
6. Total number of deaths among children under one year	22
7. Number of maternal deaths among women admitted to hospital for confinement	4
8. Total number of deaths	405
9. Total number of discharges (including infants born in hospital)	2,279
10. Duration of stay of patients included in 8 and 9 above :—	
(a) Under four weeks	1,772
(b) Four weeks and under thirteen weeks	584
(c) Thirteen weeks or more	328
11. Number of beds occupied :—	
(a) Average during the year	553
(b) Highest	595
(c) Lowest	505
12. Number of surgical operations under general anaesthetic (excluding dental operations)	2
13. Number of abdominal sections	—

(3) Out-patients :—

1. Nature and scope of out-patient provision :—Cases after discharge from this hospital and Llandough Hospital attend for continuation treatment. Casualties after treatment are referred to private practitioners or, if urgent, admitted to this hospital or Llandough Hospital.
2. Total number of persons seen in the out-patient department 651
3. Number of these persons who were subsequently admitted for in-patient treatment in the institution 114
4. Number of these persons who had received in-patient treatment in the institution 82
5. Total number of attendances in the out-patient department 1,370

(4) Classification of in-patients who were discharged from or who died in the institution during the year :—

Disease Groups	Children (under 16 years)		Men and Women	
	Dis-charged	Died	Dis-charged	Died
Acute infectious disease	5	....	3	....
Influenza ....	....	....	2	....
Tuberculosis :—				
Pulmonary	13	2	161	60
Non-pulmonary	5	2	12	8
Malignant disease ....	....	....	36	40
Rheumatism :—				
Acute rheumatism (rheumatic fever) together with sub-acute rheumatism and chorea	8	....	11	..
Non-articular manifestations of so-called "rheumatism" (muscular rheumatism, fibrositis, lumbago and sciatica)	2	....	25	1
Chronic arthritis	1	....	20	1
Venereal disease	10	....	47	1
Puerperal pyrexia ....	....	....	1	1
Puerperal fever :—				
Women confined in the hospital ....	....	....	4	....
Other cases ....	....	....	9	....
Other diseases and accidents connected with pregnancy and child-birth ....	....	....	36	10
Mental diseases :—				
Senile dementia ....	....	....	25	1
Other	4	....	229	....
Senile decay ....	....	....	22	42
Accidental injury and violence	36	....	133	18
Diseases of the :—				
Nervous system and sense organs	12	2	108	10
Respiratory system	16	5	121	20
Circulatory system	4	3	120	126
Digestive system	11	2	65	5
Genito-urinary system	7	....	84	19
Skin	49	....	112	....
Other diseases	82	10	236	12
Mothers and infants discharged from maternity wards (not included above) :—				
Mothers ....	....	....	217	....
Infants	175	....	....	....
Persons not falling under any of the above headings ....	....	4	....	....
Totals	440	30	1,839	375

ELY LODGE.

(1) Classification of the accommodation and the number of beds occupied on 31st December, 1934 :—

Classification of Wards	Number of Wards	BEDS							
		Men		Women		Children (under 16 years)		Totals	
		Pro-vided	Occu-pied	Pro-vided	Occu-pied	Pro-vided	Occu-pied	Pro-vided	Occu-pied
Mental Disease	} 14 {	143	134	192	168	5	4	340	306
Mental Defectives*		51	47	38	40†	63	21	152	108
Other		30	28	15	15	....	....	45	43
Totals ...	18	224	209	245	223	68	25	537	457

* The beds earmarked for mental defectives are those recognised for this purpose by the Board of Control. Many of the so-called mentally diseased are really defectives admitted under lunacy orders in terms of Section 24 of the Lunacy Act, 1890.

† Beds transferred in emergency.

(2) In-patients :—

Total number of admissions	....	....	....	....	79
Total number of deaths	....	....	....	....	59
Total number of discharges	....	....	....	....	62
Duration of stay of patients :—					
(a) Under four weeks	....	....	....	....	7
(b) Four weeks and under thirteen weeks	....	....	....	....	13
(c) Thirteen weeks or more	....	....	....	....	101
Number of beds occupied :—					
(a) Average during the year	....	....	....	....	478
(b) Highest	....	....	....	....	511
(c) Lowest	....	....	....	....	457

(3) Classification of in-patients who were discharged from or who died in the institution during the year :—

Disease Groups	Children (under 16 years)		Men and Women	
	Dis-charged	Died	Dis-charged	Died
Influenza	....	....	....	8
Mental diseases :—	....	....	....	....
Senile dementia	....	....	22	48
Other	1	....	....	....
Diseases of the genito-urinary system	....	....	....	3
Other diseases	....	....	39	....
Totals	1	....	61	59

XI.—HOSPITAL ACCOMMODATION.

The following tabular statement shows the amount of hospital accommodation for the sick and others in need of special care provided by the City Council and other bodies, classified according to the type of function each subserves :—

Institution	Total available Beds	Approximate Number available for Cardiff
Llandough Hospital	345	311
Isolation Hospital	149*	149*
Caerau Smallpox Hospital	31†	31†
Flat Holm Hospital (for Cholera, Yellow Fever and Plague)	16	16
Lord Pontypridd Hospital (Dulwich House)	25	25
City Lodge Poor Law Institution‡ :—		
Acute Diseases	125	
Maternity :—		
Mothers	22	
Infants	14	
Tuberculosis	78	
Mental Cases	10	
Chronic, Aged and Infirm	387	
Other	19	
	646	556
Ely Poor Law Institution‡ :—		
Mental Cases (including Mental Defectives)	492	
Chronic, Aged and Infirm	45	
	537	452
Mental Hospital	790	690
Total Rate-provided	2,539	2,230
Cardiff Royal Infirmary :—		
General	380	
Maternity :—		
Mothers	31	
Infants	25	
Convalescent Home	54	
	490	260
Prince of Wales' Hospital :—		
General	64	
Country Branch	68	
	132	12
Royal Hamadryad Seamen's Hospital	74||	74||
Total Voluntary	696	346
Grand Total	3,235	2,576
Sanatoria and Hospitals of the Welsh National Memorial Association .....	....	140

*Total adult accommodation on the basis of 144 sq. ft. per adult bed. This represents about 230 available beds and cots when allowance is made for children under 10 years.

†On the basis of 154 sq. ft. per adult bed, representing about 48 available beds when allowance is made for children under 10 years.

‡The accommodation for chronic, aged and infirm in the City Lodge and Ely Institutions and for patients suffering from mental diseases, disorders or defects at Ely Institution fluctuates slightly with requirements. Many of the beds set apart for chronic cases at the City Lodge are really occupied by patients requiring continuous medical or surgical and nursing care. The figures for Ely Institution also include accommodation approved by the Board of Control for mental defectives (about 150) who are chargeable to the Mental Deficiency Committees of the Authorities responsible for their maintenance.

||For seamen only.

XII.—TUBERCULOSIS.

New Cases of Tuberculosis.—The following tables show the age distribution and localisation of the disease among new cases of tuberculosis* coming to the knowledge of the department during 1934.

Cases of Tuberculosis by Age and Sex :—

Age Periods— Years	New Cases					
	Tuberculosis of the Respiratory System			Other Forms of Tuberculosis		
	Males	Females	Totals	Males	Females	Totals
0—1	1	....	1	1	....	1
1—5 .....	....	....	....	12	7	19
5—10	3	6	9	9	10	19
10—15	5	9	14	10	5	15
15—20	14	34	48	7	12	19
20—25	27	43	70	2	10	12
25—35	48	43	91	6	7	13
35—45	39	18	57	7	2	9
45—55	32	7	39	2	2	4
55—65	29	8	37	....	2	2
65 and upwards	6	3	9	1	....	1
Totals	204	171	375	57	57	114

Cases of Tuberculosis by Localisation of Disease and Sex :—

Form of Tuberculosis	New Cases		
	Males	Females	Totals
Respiratory System	204	171	375
Nervous System	16	10	26
Intestines and Peritoneum	10	10	20
Vertebral Column	1	2	3
Bones and Joints	14	4	18
Other Organs	16	31	47
Disseminated Tuberculosis .....	..	....	....
Totals	261	228	489

Sources of Ascertainment.—The new cases of tuberculosis were ascertained as follows :—

Source	Tuberculosis of Respiratory System	Other Forms of Tuberculosis	Totals
General Medical Practitioners	117	16	133
Welsh National Memorial Association	148	37	185
Medical Officers of Institutions	89	51	140
Other Medical Officers	6	2	8
Otherwise ascertained	15	8	23
Totals	375	114	489

* Including cases notified after death, deaths of cases not notified and cases ascertained otherwise than by formal notification.

Home Conditions of New Cases.—A detailed analysis is given below showing the living and sleeping conditions within their own tenements of 315 new cases of tuberculosis of the respiratory system at the time of their coming to the knowledge of the department during 1934.

Living accommodation of 315 Patients in Private Houses :—

Rooms in Tenement (i.e., house or part of house occupied by one family)	Patients			Total Number of Persons in Household			
	Males	Females	Totals	Over 10 years	Under 10 years	Lodgers	Totals
1 room	2	3	5	8	.....	.....	8
2 rooms	19	16	35	68	26	.....	94
3 rooms	19	15	34	91	49	.....	140
4 rooms and over	121	120	241	1,052	154	9	1,215
Totals	161	154	315	1,219	229	9	1,457

In addition to the foregoing 315 cases, there were 24 cases (20 males and 4 females) in institutions and 12 males in lodging houses at the time of notification. Information as to the living accommodation of the remaining 24 cases (11 males and 13 females) could not be ascertained for various reasons.

Sleeping accommodation of 315 Patients suffering from Tuberculosis of the Respiratory System and living in Private Houses :—

Rooms in Tenement (i.e., house or part of house occupied by one family).	Patients				Contacts		
	With Room to Self	With Bed but not Room to Self	With neither Bed nor Room to Self*	Totals	Sleeping in same bed as Patient*	Sleeping in separate Bed but in same room as Patient	Totals
1 room	2	1	2	5	2	1	3
2 rooms	5	1	29	35	35	17	52
3 rooms	9	2	23	34	27	9	36
4 rooms and over	128	24	89	241	94	58	152
Totals	144	28	143	315	158	85	243

* Including married persons.

It will be seen that 144, or 45·7 per cent., of the new cases had sleeping rooms to themselves, and that the number of persons exposed to infection by sleeping in the same bedrooms as patients was 243.

Known Cases of Tuberculosis.—The numbers of cases of tuberculosis remaining on the register at the end of 1934 were as follows :—

Tuberculosis of the Respiratory System :—

Males	....	....	640
Females	....	....	458
Total	....	....	<hr/>1,098

Other Forms of Tuberculosis :—

Males	....	....	247
Females	....	....	199
Total	....	....	<hr/>446
Grand Total	....	....	<hr/>1,544

Of the foregoing cases, the numbers who were under observation by the tuberculosis nurses were as follows* :—

Tuberculosis of the Respiratory System :—

Males	....	....	530
Females	....	....	390
Total	....	....	<hr/>920

Other Forms of Tuberculosis :—

Males	....	....	212
Females	....	....	182
Total	....	....	<hr/>394
Grand Total	....	....	<hr/>1,314

In addition to the cases referred to above, 183 unnotified cases of suspected tuberculosis (107 males and 76 females) were under observation by the nurses at the end of the year.

The number of known cases of tuberculosis (1,544) shows an increase of 76 compared with the number at the end of 1933.

During 1934 the tuberculosis nurses made 477 first visits and 2,288 revisits to the homes of patients.

* Cases regarded as not being under observation are those (1) permanently residing in institutions, (2) temporarily residing in institutions whose home addresses are unknown, (3) who by special request are not visited and (4) who have been "lost sight of."

Occupational Incidence.—In 1924 the department began to collate information regarding the occupational incidence of tuberculosis, because of its possible relationship to the high incidence of the disease in Cardiff. In the two following tables the occupations of 3,072 males and 2,305 females who were notified or otherwise ascertained to be suffering from tuberculosis during the years 1924 to 1934 are given as completely as possible.

Occupations of 3,072 males notified or otherwise ascertained to be suffering from tuberculosis during the 11 years 1924-1934 :—

	Tuberculosis of the Respiratory System		Other Forms of Tuberculosis		All Forms of Tuberculosis		
	Number	Percentage	Number	Percentage	Number	Percentage	Mean Annual Case-rate per 1,000
Professional Occupations ..	16	0·69	1	0·135	17	0·55	0·90
Insurance, Commission, etc., Agents ..	18	0·77	2	0·27	20	0·65	1·64
Commercial Travellers ..	47	2·01	3	0·406	50	1·63	3·55
Clerks ..	214	9·17	23	3·11	237	7·71	3·76
Teachers and Students ..	21	0·90	5	0·68	26	0·85	0·87
Shopkeepers and Shop Assistants ..	100	4·28	13	1·76	113	3·68	2·02
Bakers and Confectioners ..	16	0·69	1	0·135	17	0·55	2·46
Butchers ..	20	0·86	1	0·135	21	0·68	2·56
Tailors ..	14	0·60	...	...	14	0·46	3·82
Printers ..	13	0·56	1	0·135	14	0·46	1·74
Factory Workers ..	11	0·47	...	...	11	0·36	0·62
Laundry Workers ..	6	0·26	1	0·135	7	0·23	0·61
Upholsterers ..	7	0·30	2	0·27	9	0·29	0·20
Warehousemen, etc.	32	1·37	9	1·22	41	1·33	2·25
Postmen ..	13	0·56	...	...	13	0·42	2·59
Messengers and Porters ..	46	1·97	9	1·22	55	1·79	2·48
Railway Workers ..	55	2·36	6	0·81	61	1·98	1·78
Engineers and Fitters ..	44	1·89	9	1·22	53	1·73	2·00
Boilermakers, Iron and Steel-workers, etc.	25	1·07	4	0·54	29	0·94	0·78
Electricians ..	19	0·81	2	0·27	21	0·68	2·06
Building Artisans ..	112	4·80	17	2·30	129	4·20	2·23
Seamen ..	445*	19·07	118†	15·97	563‡	18·33	12·55
Hairdressers ..	12	0·51	1	0·135	13	0·42	3·36
Colliers ..	12	0·51	1	0·135	13	0·42	3·13
Chauffeurs and Motor Drivers ..	34	1·46	1	0·135	35	1·14	1·36
Tram and Bus Conductors ..	22	0·94	1	0·135	23	0·75	5·08
Hauliers, Vanmen and Hawkers ..	48	2·06	6	0·81	54	1·76	4·57
Gardeners ..	10	0·43	1	0·135	11	0·36	2·03
Labourers (various) ..	328	14·06	36	4·87	364	11·85	3·88
Miscellaneous ..	322	13·80	42	5·68	364	11·85	2·37
No Occupation or Unknown ..	128	5·49	47	6·36	175	5·70	2·71
Children of School Age ..	90	3·86	213	28·82	303	9·86	1·41
Children under School Age ..	33	1·41	163	22·06	196	6·38	2·01
All Males ..	2,333	100·00	739	100·00	3,072	100·00	2·60

* British 150 ; Foreign 295.

† British 26 ; Foreign 92.

‡ British 176 ; Foreign 387.

Occupations of 2,305 females notified or otherwise ascertained to be suffering from tuberculosis during the 11 years 1924-1934 :—

	Tuberculosis of the Respiratory System		Other Forms of Tuberculosis		All Forms of Tuberculosis		
	Number	Percentage	Number	Percentage	Number	Percentage	Mean Annual Case-rate per 1,000
Nurses	25	1.44	1	0.18	26	1.13	3.06
Teachers and Students	20	1.15	6	1.06	26	1.13	0.78
Clerks and Typists	97	5.58	11	1.94	108	4.68	2.74
Shopkeepers and Shop Assistants	105	6.04	18	3.18	123	5.34	2.60
Waitresses and Barmaids	29	1.67	4	0.71	33	1.43	2.77
Laundry Workers	20	1.15	4	0.71	24	1.04	2.96
Tailoresses	21	1.21	5	0.88	26	1.13	3.07
Factory Workers	60	3.42	15	2.65	75	3.25	2.50
Packers	9	0.52	3	0.53	12	0.52	2.18
Domestic Servants	208	11.96	39	6.89	247	10.72	3.22
Dressmakers and Milliners	19	1.09	3	0.53	22	0.95	2.35
Housewives	749	43.07	101	17.84	850	36.88	1.36
Miscellaneous	54	3.10	6	1.06	60	2.60	2.13
No Occupation or Unknown	182	10.46	54	9.54	236	10.24	6.09
Children of School Age	112	6.44	177	31.27	289	12.54	1.34
Children under School Age	29	1.67	119	21.02	148	6.42	1.53
All Females	1,739	100.00	566	100.00	2,305	100.00	1.80

As might be expected, the large number of cases that occurred amongst seamen is the most notable feature of the figures. The figures also show that tuberculosis affects all classes of the community. Some of the percentages and case-rates might appear to be high, but the figures, taken as a whole, suggest that there is no reason for believing that there is any industry in Cardiff, other than seafaring, which specially predisposes to tuberculosis.

Places of Birth of Patients and their Parents.—On pages 53 and 54 tables are given which show the places of birth of (a) 3,536 persons notified or otherwise ascertained to be suffering from tuberculosis during the years 1926 to 1934 and (b) the parents of 3,123 such persons. A beginning was made in 1926 to collect this information and, although the data could not be obtained regarding every case that came to the knowledge of the department, sufficient information is now available to make its publication worth while.

It will be seen from the table on page 53 that 63.34 per cent. of the persons suffering from tuberculosis of the respiratory system and 74.29 per cent. of those suffering from other forms of tuberculosis were born in Cardiff, which, of course, means that more than one-third of the former and about one-quarter of the latter were born elsewhere. It is unnecessary to recapitulate here in detail the proportions born in various places outside Cardiff, as they are set out clearly in the table. In considering the number and proportion of the persons suffering from other forms of tuberculosis, it should be borne in mind that the disease mainly effects young children at an age when migration is unusual.

The question of immigration to Cardiff during the period 1850 to 1911 is mentioned on page 57. The figures on page 54 regarding the places of birth of the parents of persons suffering from tuberculosis are therefore of significance.

Both parents were born in Cardiff in only 29.25 per cent. of the persons suffering from tuberculosis of the respiratory system and in only 38.30 per cent. of the persons suffering from other forms of tuberculosis, although, altogether, in 51.04 per cent. and 55.27 per cent. respectively both parents were born in urban districts of Great Britain. It should be mentioned, however, that the figures in columns 11 and 12 include certain numbers of instances in which one of the parents was born in Cardiff.

In the absence of comparable information for other towns, it would be unsafe to draw any definite conclusions from the statistics in the tables, but they would appear to bear some relationship to the comparatively high incidence of tuberculosis in Cardiff.

Places of birth of 3,536 persons notified or otherwise ascertained to be suffering from tuberculosis during the 9 years 1926-1934 with regard to whom the information was obtainable :—

1	Wales				England and Scotland		Totals England, Scotland and Wales		Ireland 9	Dominions, Colonies and Foreign Countries 10	Grand Totals 11
	Cardiff 2	Other Ur- ban Dis- tricts 3	Rural Dis- tricts 4	Urban Dis- tricts 5	Rural Dis- tricts 6	Urban Dis- tricts 7	Rural Dis- tricts 8				
Tuberculosis of the Respiratory System	Males	902	116	22	200	45	1,218	67	29	193	1,507
	Females	803	125	29	165	38	1,093	67	12	13	1,185
	Totals	1,705	241	51	365	83	2,311	134	41	206	2,692
	Percentage	63·34	8·95	1·89	13·56	3·08	85·85	4·98	1·52	7·65	100·00
Other Forms of Tuberculosis	Males	336	25	4	34	7	395	11	5	59	470
	Females	291	27	5	32	11	350	17	4	3	374
	Totals	627	52	10	66	18	745	28	9	62	844
	Percentage	74·29	6·16	1·18	7·82	2·13	88·27	3·32	1·07	7·34	100·00
All Forms of Tuberculosis	Males	1,238	141	26	234	52	1,613	78	34	252	1,977
	Females	1,094	152	35	197	49	1,443	84	16	16	1,559
	Totals	2,332	293	61	431	101	3,056	162	50	268	3,536
	Percentage	65·95	8·29	1·72	12·19	2·86	86·43	4·58	1·41	7·58	100·00

Places of birth of parents of 3,123 persons notified or otherwise ascertained to be suffering from tuberculosis during the 9 years 1926-1934 with regard to whom the information was obtainable:—

		Both Parents										One Parent born in an Urban District, the other in a Rural District of the British Islands 11	Other Combinations of Parentage 12	Grand Totals 13		
		Wales				England and Scotland		Totals : England, Scotland and Wales		Ireland 9	Dominions, Colonies and Foreign Countries 10					
		Cardiff 2	Other Urban Districts 3	Rural Districts 4	England and Scotland		Urban Districts 5	Rural Districts 6	Urban Districts 7						Rural Districts 8	
					Urban Districts 5	Rural Districts 6										
Tuberculosis of the Respiratory System	Males	374	82	14	172	77	628	91	47	122	100	290	1,278			
	Females	312	82	10	175	63	569	73	26	12	97	290	1,067			
	Totals	686	164	24	347	140	1,197	164	73	134	197	580	2,345			
	Percentage	29.25	6.99	1.02	14.80	5.98	51.04	6.99	3.11	5.71	8.40	24.73	100.00			
Other Forms of Tuberculosis	Males	168	21	4	43	4	232	8	6	38	21	115	420			
	Females	130	24	4	44	10	198	14	3	1	20	122	358			
	Totals	298	45	8	87	14	430	22	9	39	41	237	778			
	Percentage	38.30	5.78	1.03	11.18	1.80	55.27	2.83	1.16	5.01	5.27	30.46	100.00			
All Forms of Tuberculosis	Males	542	103	18	215	81	860	99	53	160	121	405	1,698			
	Females	442	106	14	219	73	767	87	29	13	117	412	1,425			
	Totals	984	209	32	434	154	1,627	186	82	173	238	817	3,123			
	Percentage	31.51	6.69	1.02	13.90	4.93	52.10	5.96	2.62	5.54	7.62	26.16	100.00			

Deaths.—The numbers of deaths from tuberculosis of the respiratory system and from other forms of tuberculosis during the year were 205 and 50 respectively. The death-rate per 1,000 of the population from tuberculosis of the respiratory system was 0·93 and from other forms of tuberculosis 0·22.

The two following tables show the age distribution and localisation of the disease among the deaths from tuberculosis during 1934.

Deaths from Tuberculosis by Age and Sex :—

Age Periods—Years	Deaths					
	Tuberculosis of the Respiratory System			Other Forms of Tuberculosis		
	Males	Females	Totals	Males	Females	Totals
0—1	1	....	1	1	....	1
1—5 .....	....	....	....	9	3	12
5—10 .....	....	....	....	2	4	6
10—15 .....	....	5	5	3	1	4
15—20	10	9	19	3	5	8
20—25	12	17	29	1	3	4
25—35	34	30	64	6	1	7
35—45	21	8	29	3	....	3
45—55	16	8	24	2	1	3
55—65	18	9	27	1	....	1
65 and upwards	5	2	7	1	....	1
Totals	117	88	205	32	18	50

Deaths from Tuberculosis by Sex and Localisation of Disease :—

Form of Tuberculosis	Deaths		
	Males	Females	Totals
Respiratory System	117	88	205
Central Nervous System	14	9	23
Intestines and Peritoneum	3	4	7
Vertebral Column .....	....	1	1
Other Bones and Joints	6	....	6
Other Organs	5	4	9
Disseminated Tuberculosis	4	....	4
Totals	149	106	255

The number and proportion of cases that died in 1934 who were previously unknown to the department will be seen from the following figures :—

	Total Number of Deaths	Deaths of Cases previously unknown	
		Number	Percentage
Tuberculosis of the Respiratory System	205	19	9·2
Other Forms of Tuberculosis	50	22	44·0
Totals	255	41	16·1

In all instances of new cases of tuberculosis coming to the knowledge of the department through the death returns, the attention of the medical practitioners concerned is directed to their omission to have notified the cases under the Public Health (Tuberculosis) Regulations, 1930. Usually the reason given for not having notified a case of tuberculosis of the respiratory system is that the practitioner was called in late in the course of the disease and believed that the case had been notified previously by another practitioner. With regard to other forms of tuberculosis, it is usually cases of tuberculosis of the central nervous system—in which death follows quickly on the onset of the disease—that are not notified.

The following table shows the tuberculosis death-rates per 1,000 of the population for Cardiff in each of the last 41 years.

Death-rates per 1,000 of the population from Tuberculosis for Cardiff during the years 1894 to 1934 :—

Year	Tuberculosis of the Respiratory System			Other Forms of Tuberculosis		
	Males	Females	Both Sexes	Males	Females	Both Sexes
1894	1·81	1·43	1·62	0·91	1·01	0·96
1895	1·85	1·54	1·69	1·04	0·73	0·89
1896	1·52	1·25	1·38	0·73	0·82	0·78
1897	1·34	1·40	1·37	0·96	0·79	0·87
1898	1·46	1·18	1·32	0·84	0·68	0·76
1899	1·34	1·31	1·32	0·66	0·85	0·76
1900	1·34	1·29	1·31	0·54	0·82	0·69
1901	1·13	1·00	1·06	0·75	0·58	0·66
1902	1·45	1·18	1·32	0·69	0·63	0·66
1903	1·29	1·16	1·22	0·57	0·52	0·55
1904	1·60	1·23	1·41	0·68	0·68	0·68
1905	1·41	1·27	1·34	0·63	0·49	0·56
1906	1·41	1·15	1·28	0·67	0·42	0·55
1907	1·30	1·15	1·23	0·59	0·45	0·52
1908	1·27	1·10	1·19	0·52	0·52	0·52
1909	1·59	1·03	1·31	0·43	0·40	0·41
1910	1·23	1·16	1·19	0·51	0·46	0·49
1911	1·51	1·40	1·46	0·41	0·32	0·37
1912	1·48	1·30	1·39	0·46	0·27	0·36
1913	1·42	1·14	1·28	0·43	0·36	0·40
1914	1·35	1·12	1·23	0·32	0·36	0·34
1915	1·48	1·32	1·39	0·67	0·43	0·55
1916	1·48	1·40	1·44	0·53	0·44	0·49
1917	1·90	1·34	1·60	0·36	0·32	0·34
1918	2·40	1·50	1·90	0·52	0·25	0·37
1919	1·61	1·08	1·35	0·35	0·36	0·36
1920	1·56	1·14	1·35	0·35	0·19	0·27
1921	1·39	1·11	1·24	0·26	0·34	0·30
1922	1·49	1·12	1·30	0·31	0·25	0·28
1923	1·53	1·15	1·33	0·37	0·33	0·35
1924	1·42	1·13	1·28	0·29	0·20	0·25
1925	1·57	1·10	1·33	0·30	0·10	0·20
1926	1·26	0·89	1·09	0·21	0·16	0·19
1927	1·50	1·05	1·26	0·29	0·24	0·28
1928	1·08	0·93	1·01	0·21	0·19	0·20
1929	1·18	1·09	1·14	0·19	0·20	0·20
1930	1·07	0·87	0·94	0·25	0·15	0·21
1931	1·38	0·77	1·06	0·32	0·17	0·23
1932	1·37	0·76	1·05	0·26	0·18	0·21
1933	1·32	0·80	1·05	0·20	0·22	0·21
1934	1·10	0·76	0·93	0·30	0·16	0·22

The figures in the foregoing table show that the death-rate per 1,000 from tuberculosis of the respiratory system has declined from 1·62 in 1894 to 0·93 in 1934 and that the death-rate from other forms of tuberculosis has declined from 0·96 to 0·22 in the

same period. The death-rates from tuberculosis of the respiratory system and from other forms of tuberculosis have therefore fallen during the 41 years by 42·6 per cent. and 77·1 per cent. respectively. The death-rate from tuberculosis in Cardiff has not declined so rapidly nor to so low a level as that for England and Wales as a whole and certain other large towns, but really the death-rate for Cardiff should be compared, not with that for England and Wales and towns more favourably placed as far as the constitution of their populations is concerned, but with those for seaports in which the conditions unfavourable to a low tuberculosis death-rate are comparable. There is also the factor mentioned in the annual report for 1933 to be taken into consideration, viz., the large influx of immigrants from rural areas to Cardiff that took place during the rapid increase in the population during the period 1850 to 1911. It is well known that immigrants from rural areas are very susceptible to tuberculosis when they take up residence in urban districts. Then, there are the persons (mainly seafarers) who constitute a relatively high proportion of Cardiff's population to be taken into consideration. The proportion of persons residing in Cardiff who were born outside the British Isles, as enumerated at the Census of 1931, was 23·9 per 1,000, i.e., 6·1 per 1,000 higher than that of any other seaport in the country. It is also well known that the death-rate from tuberculosis amongst seamen—especially Arabs—is high; and the proportion of Arabs residing in Cardiff is exceptionally high. Taking these factors into consideration, it is not surprising that, compared with England and Wales and towns with low proportions of foreign-born residents of the seafaring class, the tuberculosis death-rate for Cardiff is high. But when the death-rate is compared, as it should be, with the death-rates for other seaports, whose populations are somewhat similarly constituted, the true position of Cardiff is revealed.

In the following table the death-rate in each of the last 10 years from all forms of tuberculosis for Cardiff is compared with those for other seaports which are to some extent comparable from the point of view of the proportions of their populations born outside the British Isles. The death-rate for England and Wales is also included.

Death-rate per 1,000 of the population from All Forms of Tuberculosis for England and Wales and certain seaport towns during the years 1925 to 1934 :—

	Death-rate per 1,000 from All Forms of Tuberculosis									
	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
England and Wales	1·03	0·96	0·97	0·93	0·96	0·90	0·90	0·84	0·82	0·76
CARDIFF	1·53	1·28	1·54	1·21	1·34	1·15	1·29	1·26	1·26	1·15
Kingston-upon-Hull	1·27	1·20	1·24	1·22	1·27	1·28	1·36	1·01	1·09	1·01
Liverpool	1·51	1·49	1·38	1·39	1·49	1·43	1·35	1·32	1·34	1·15
Manchester	1·58	1·44	1·41	1·32	1·44	1·40	1·29	1·16	1·15	1·13
Middlesbrough	1·62	1·31	1·45	1·51	1·68	1·63	1·64	1·49	1·53	1·24
South Shields	1·78	1·78	1·56	2·13	1·86	1·66	1·70	1·92	1·84	1·75

It will be seen from the figures in this table that, although the death-rate for Cardiff is higher than that for England and Wales, it does not compare unfavourably with that for the other seaport towns. It should be mentioned that the high death-rate for South Shields is due mainly to the large number of Arabs residing in that town.

On page 58 the death-rates from all forms of tuberculosis for the municipal wards of Cardiff during the years 1923 to 1934 are shown. As might be expected, the figures show that the highest death-rates occur in the wards that partly constitute the area where the majority of the foreign-born and other seafarers live and where, in parts, there are poor housing and social conditions, and that the lowest death-rates occur in the wards in which, generally, the housing and social conditions are much better.

Death-rate per 1,000 of the population from All Forms of Tuberculosis for all the Municipal Wards*
of Cardiff during the 12 years 1923—1934 :—

Year	Adams-down	Central	South	Grange-town	River-side	Sploitt	Cathays	Canton	Plas-newydd	Roath	Llandaff	Gabalfa	Penylan
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1923	3.83	2.35	1.98	1.46	1.64	1.09	1.07	1.39	1.56	1.40	0.72	1.29	1.07
1924	3.80	1.75	2.22	1.69	1.06	1.22	0.99	1.12	1.50	1.03	1.20	1.35	1.47
1925	4.99	2.36	1.94	1.01	1.48	1.32	1.13	1.13	1.40	0.89	1.33	1.04	0.75
1926	3.17	1.72	1.12	1.73	1.19	1.28	0.81	1.45	0.95	0.79	0.94	0.75	1.34
1927	3.79	1.90	1.80	1.21	1.30	1.61	1.91	1.03	1.22	1.32	1.88	0.73	0.79
1928	2.88	1.78	1.73	1.37	1.15	1.47	1.93	1.05	0.81	1.87	1.00	0.71	0.85
1929	3.41	1.79	1.49	1.32	1.78	1.54	1.06	0.88	1.08	0.89	1.08	1.23	0.60
1930	2.58	1.68	1.14	1.53	0.82	0.92	0.96	1.07	0.84	1.20	0.90	0.96	1.11
1931	4.02	1.51	1.44	1.74	1.60	1.07	0.89	1.09	0.59	1.03	0.99	1.02	0.65
1932	3.81	1.77	1.89	1.08	1.71	1.19	0.72	1.11	1.04	1.07	0.58	1.02	1.10
1933	2.90	1.52	1.70	1.70	1.23	1.35	1.14	1.11	1.35	0.63	0.61	0.75	0.85
1934	2.66	1.14	1.28	1.17	1.17	1.07	0.96	0.76	0.74	1.01	0.88	0.90	0.85
Average	3.49	1.77	1.64	1.42	1.34	1.26	1.13	1.10	1.09	1.09	1.01	0.98	0.95

* The present municipal wards were constituted in November, 1922.

Treatment.—The following tables give particulars of the examination and treatment of Cardiff cases under the scheme of the Welsh National Memorial Association during 1934.

1.—WORK OF THE DISPENSARY.

	Tuberculosis of the Respiratory System				Other Forms of Tuberculosis				Totals			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New cases examined during the year (excluding contacts):—												
(a) Definitely tuberculous	134	129	6	11	12	22	5	13	146	151	11	24
(b) Diagnosis not completed	...	...	...	...	...	...	...	...	9	6	15	7
(c) Non-tuberculous	...	...	...	...	...	...	...	...	140	134	51	37
B.—Contacts examined during the year:—												
(a) Definitely tuberculous	...	...	...	2	...	...	...	...	...	...	...	2
(b) Diagnosis not completed	...	...	...	...	...	...	...	...	...	1	...	3
(c) Non-tuberculous	...	...	...	...	...	...	...	...	35	52	31	34
C.—Cases written off the Dispensary Register as:—												
(a) Recovered	11	8	1	1	3	3	...	12	14	11	1	13
(b) Non-tuberculous (including cases previously diagnosed and entered on the Dispensary Register as tuberculous)	...	...	...	...	...	...	...	...	179	193	94	79
D.—Number of cases on Dispensary Register on December 31st:—												
(a) Definitely tuberculous	408	257	24	28	66	75	85	75	474	332	109	103
(b) Diagnosis not completed	...	...	...	...	...	...	...	...	11	7	12	44

1. Number of cases on Dispensary Register on January 1st	1,014
2. Number of cases transferred from other areas and cases returned after discharge under Head 3 in previous years	19
3. Number of cases transferred to other areas, cases not desiring further assistance under the scheme, and cases "lost sight of"	120
4. Cases written off during the year as dead (all causes)	156
5. Number of attendances at the Dispensary (including contacts)	6,809
6. Number of Insured Persons under Domiciliary Treatment on December 31st	8
7. Number of consultations with medical practitioners:—	
(a) Personal	96
(b) Other	1,039
8. Number of visits by Tuberculosis Officers to homes (including personal consultations)	207
9. Number of visits by Nurses or Health Visitors to homes for Dispensary purposes	1,927
10. Number of:—	
(a) Specimens of sputum examined in connection with Dispensary Work	667
(b) X-Ray examinations made in connection with Dispensary Work	1,261
11. Number of "Recovered" cases restored to Dispensary Register and included in A (a) and A (b) above	—
12. Number of "T.B. plus" cases on Dispensary Register on December 31st	474

2.—RESIDENTIAL TREATMENT.

		In Institutions on Jan. 1st	Admitted during the year	Discharged during the year	Died in Institutions	In Institutions on Dec. 31st
Number of doubtfully tuberculous cases admitted for observation	Adult males	...	5	5	...	...
	Adult females	...	4	4	...	...
	Children	1	11	5	...	7
	Totals	1	20	14	...	7
Number of patients suffering from Tuberculosis of the Respira- tory System	Adult males	88	179	150	30	87
	Adult females	42	158	120	20	60
	Children	8	25	23	2	8
	Totals	138	362	293	52	155
Number of patients suffering from other forms of Tuberculosis	Adult males	9	10	9	2	8
	Adult females	3	9	10	...	2
	Children	23	28	31	2	18
	Totals	35	47	50	4	28
Grand Totals		174	429	357	56	190

3.—RESULTS OF OBSERVATION OF DOUBTFULLY TUBERCULOUS CASES DISCHARGED FROM RESIDENTIAL INSTITUTIONS.

(a) Sanatorium and Hospital (Pulmonary Cases).

Diagnosis on discharge from Observation	Stay under 4 weeks			Stay over 4 weeks			Totals		
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous	2	1	...	2	1	...
Non-tuberculous	...	1	...	1	1	2	1	2	2
Doubtful	1	...	...	1
Totals	...	1	...	3	2	3	3	3	3

(b) Hospital (Non-Pulmonary Cases).

Diagnosis on discharge from observation	Stay under 4 weeks			Stay over 4 weeks			Totals		
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous	1	...	...	1	...	...	2	...	...
Non-tuberculous	...	...	...	...	1	2	...	1	2
Doubtful	...	...	...	...	...	...	...	...	...
Totals	1	...	...	1	1	2	2	1	2

4.—IMMEDIATE RESULTS OF TREATMENT OF DEFINITELY TUBERCULOUS PATIENTS DISCHARGED FROM RESIDENTIAL INSTITUTIONS.

(a) Sanatorium (Pulmonary Cases).

Condition at time of Discharge	Duration of Residential Treatment												Totals
	Under 3 months			3-6 months			6-12 months			More than 12 months			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Quiescent	1			2	13	5	4		3	2			30
Not Quiescent	7	2	1	18	19	2	16	5	1	7			78
Died				1							1		2
Totals	8	2	1	21	32	7	20	5	4	9	1		110

(b) Hospital (Pulmonary Cases).

Condition at time of Discharge	Duration of Residential Treatment												Totals			
	Under 3 months			3-6 months			6-12 months			More than 12 months						
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.				
Quiescent	1	1	1	1	2	....	....	1	....	7			
Not Quiescent	27	21	2	10	9	4	1	2	1	139			
Died	14	6	1	6	7	1	3	4	1	43
Totals	50	32	1	34	29	4	14	15	4	2	3	1	189

(c) Hospital (Non-Pulmonary Cases).

Condition at time of Discharge			Duration of Residential Treatment											Totals		
			Under 3 months			3-6 months			6-12 months			More than 12 months				
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.		Ch.	
Quiescent	....	...	1	....	....	2	....	1	1	....	4	....	....	3	12
Not Quiescent	....	...	2	2	6	2	2	5	1	....	4	....	1	2	27
Died	....	....	....	....	1	1	....	....	1	....	1	....	....	....	4
Totals			...	3	2	7	5	2	6	3	9	1	5	43

XIII.—VENEREAL DISEASES.

The following is a summary of the returns for 1934 from treatment centres established under the Public Health (Venereal Diseases) Regulations, 1916 :—

	Cardiff Royal Infirmary	Royal Hamadryad Seamen's Hospital*	Auxiliary Centre for Mothers and Children	Institutions outside Cardiff	Totals
A. Number of persons residing in Cardiff dealt with during the year for the first time and found to be suffering from :—					
Syphilis	97	190	34	1	322
Soft Chancre	2	90	...	1	93
Gonorrhoea	318	285	74	...	677
Conditions other than Venereal	121	25	100	...	246
Totals	538	590	208	2	1,338
B. Number of attendances of all patients residing in Cardiff	12,920	9,717	3,261	6	25,904
C. Aggregate number of "in-patient days" of all patients residing in Cardiff .....	...	2,185	...	...	2,185
D. Number of doses of arsenobenzene compounds given to patients residing in Cardiff	1,380	665	790	4	2,839

Examination of pathological material from patients residing in Cardiff and patients at institutions in or belonging to Cardiff :—

	Microscopical		Serum Tests		
	Spiro- chetes	Gono- cocci	Wasser- mann	Others for Syphilis	For Gonor- rhoea
Specimens examined at Treatment Centres :—					
Cardiff Royal Infirmary .....	...	393	605	...	...
Royal Hamadryad Seamen's Hospital*	32	111	...	...	...
Specimens examined at the Cardiff and County Public Health Laboratory from :—					
Treatment Centres :—					
Royal Hamadryad Seamen's Hospital*	3	3	206	...	...
Auxiliary Centre for Mothers and Children	3	306	131	...	...
Public Health Department .....	...	12	1,384	...	...
Other sources	4	208	1,305	...	...
	—10	—529	—3,026	...	...
Totals	42	1,033	3,631	...	...

*The figures relate to seamen only, whether residents of Cardiff or not.

Results of Treatment.—The following summaries, relating to *all persons* treated during 1934, have been prepared from the annual returns of the clinical officers.

Cardiff Royal Infirmary.

	Syphilis		Soft Chancre		Gonorrhoea		Conditions other than Venereal		Totals			Percentage
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes	
(1) Number of cases on 1st January under treatment or observation	200	216	2	....	178	65	39	8	419	289	708	51.7
(2) Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	5	5	....	....	2	5	....	....	7	10	17	1.2
(3) Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from:—												
Syphilis, primary	25	3	....	....	....	....	....	....	25	3	28	2.1
" secondary	8	11	....	....	....	....	....	....	8	11	19	1.4
" latent in 1st year of infection	4	5	....	....	....	....	....	....	4	5	9	0.7
" all later stages	16	16	....	....	....	....	....	....	16	16	32	2.3
" congenital	1	14	....	....	....	....	....	....	1	14	15	1.1
Soft Chancre	....	....	2	....	....	....	....	....	2	....	2	0.1
Gonorrhoea, 1st year of infection	....	....	....	....	288	33	....	....	288	33	321	23.5
" later	....	....	....	....	9	11	....	....	9	11	20	1.5
Conditions other than venereal	....	....	....	....	....	....	127	17	127	17	144	10.5
(4) Number of cases dealt with for the first time during the year under report known to have received treatment at other centres for the same infection	14	3	....	....	34	2	....	....	48	5	53	3.9
Totals	273	273	4	....	511	116	166	25	954	414	1,368	100.0
(5) Number of cases discharged after completion of treatment and final tests of cure	28	14	1	....	91	12	162	17	282	43	325	23.8
(6) Number of cases which ceased to attend before completion of treatment and were on first attendance suffering from:—												
Syphilis, primary	43	6	....	....	....	....	....	....	43	6	49	3.6
" secondary	5	10	....	....	....	....	....	....	5	10	15	1.1
" latent in 1st year of infection	3	4	....	....	....	....	....	....	3	4	7	0.5
" all later stages	17	11	....	....	....	....	....	....	17	11	28	2.1
" congenital	4	4	....	....	....	....	....	....	4	4	8	0.6
Soft Chancre	....	....	....	....	....	....	....	....	....	....	....	....
Gonorrhoea, 1st year of infection	....	....	....	....	162	12	....	....	162	12	174	12.7
" later	....	....	....	....	4	10	....	....	4	10	14	1.0
(7) Number of cases which ceased to attend after completion of treatment but before final test of cure	18	11	....	....	44	6	....	....	62	17	79	5.8
(8) Number of cases transferred to other centres or to institutions, or to care of private practitioners	12	9	....	....	19	7	....	....	31	16	47	3.4
(9) Number of cases remaining under treatment or observation on 31st December	143	204	3	....	191	69	4	8	341	281	622	45.5
Totals	273	273	4	....	511	116	166	25	954	414	1,368	100.0

Royal Hamadryad Seamen's Hospital (Seamen only).

	Syphilis	Soft Chancre	Gonor- rhoea	Conditions other than Venereal	Totals	Per- centage
(1) Number of cases on 1st January under treatment or observation	48	18	56	....	122	15.8
(2) Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	22	1	36	....	59	7.7
(3) Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from :—						
Syphilis, primary	82	....	....	....	82	10.6
" secondary	20	....	....	....	20	2.6
" latent in 1st year of infection	....	....	....	....	....	....
" all later stages	4	....	....	....	4	0.5
" congenital	....	....	....	....	....	....
Soft Chancre	....	79	....	....	79	10.2
Gonorrhoea, 1st year of infection	....	....	205	....	205	26.6
" later	....	....	16	....	16	2.0
Conditions other than venereal	....	....	....	25	25	3.2
(4) Number of cases dealt with for the first time during the year under report known to have received treatment at other centres for the same infection	84	11	64	....	159	20.6
Totals	260	109	377	25	771	100.0
(5) Number of cases discharged after completion of treatment and final tests of cure	44	59	66	25	194	25.2
(6) Number of cases which ceased to attend before completion of treatment and were on first attendance suffering from :—						
Syphilis, primary	75	....	....	....	75	9.7
" secondary	10	....	....	....	10	1.3
" latent in 1st year of infection	....	....	....	....	....	....
" all later stages	....	....	....	....	....	....
" congenital	....	....	....	....	....	....
Soft Chancre	....	20	....	....	20	2.6
Gonorrhoea, 1st year of infection	....	....	95	....	95	12.5
" later	....	....	12	....	12	1.5
(7) Number of cases which ceased to attend after completion of treatment but before final test of cure	47	....	78	....	125	16.2
(8) Number of cases transferred to other centres or to institutions or to care of private practitioners	46	20	82	....	148	19.2
(9) Number of cases remaining under treatment or observation on 31st December	38	10	43	....	91	11.8
Totals	260	109	377	25	771	100.0

Auxiliary Centre for Mothers and Children.

	Syphilis		Soft Chancre		Gonorrhoea		Conditions other than Venereal		Totals			Percentage
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes	
(1) Number of cases on 1st January under treatment or observation	25	76	....	....	....	86	....	23	25	185	210	48.3
(2) Number of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	..	7	..	....	....	5	....	....	....	12	12	2.8
(3) Number of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from :—												
Syphilis, primary	....	1	....	....	....	....	....	....	....	1	1	0.2
" secondary	....	....	....	....	....	....	....	....	....	....	....	....
" latent in 1st year of infection	....	1	....	....	....	....	....	....	....	1	1	0.2
" all later stages	....	14	....	....	....	....	....	....	....	14	14	3.2
" congenital	6	12	....	....	....	....	....	....	6	12	18	4.1
Soft Chancre	....	....	....	....	....	....	....	....	....	....	....	....
Gonorrhoea, 1st year of infection	....	....	....	....	2	43	....	....	2	43	45	10.3
" later	....	....	....	....	....	29	....	....	....	29	29	6.7
Conditions other than venereal	....	....	....	....	....	....	2	98	2	98	100	23.0
(4) Number of cases dealt with for the first time during the year under report known to have received treatment at other centres for the same infection	..	2	..	....	..	3	....	....	....	5	5	1.2
Totals	31	113	....	....	2	166	2	121	35	400	435	100.0
(5) Number of cases discharged after completion of treatment and final tests of cure	5	9	....	....	2	73	....	111	7	193	200	46.0
(6) Number of cases which ceased to attend before completion of treatment and were on first attendance suffering from :—												
Syphilis, primary	....	....	....	....	....	....	....	....	....	....	....	....
" secondary	....	....	....	....	....	....	....	....	....	....	....	....
" latent in 1st year of infection	....	....	....	....	....	....	....	....	....	....	....	....
" all later stages	....	11	....	....	....	....	....	....	....	11	11	2.5
" congenital	3	3	....	....	....	....	....	....	3	3	6	1.4
Soft Chancre	....	....	....	....	....	....	....	....	....	....	....	....
Gonorrhoea, 1st year of infection	....	....	....	....	....	18	....	....	....	18	18	4.1
" later	....	....	....	....	....	9	....	....	....	9	9	2.1
(7) Number of cases which ceased to attend after completion of treatment but before final test of cure	....	....	....	....	....	6	....	....	....	6	6	1.4
(8) Number of cases transferred to other centres or to institutions, or to care of private practitioners	....	2	....	....	....	6	....	....	....	8	8	1.8
(9) Number of cases remaining under treatment or observation on 31st December	23	88	....	....	....	54	2	10	25	152	177	40.7
Totals	31	113	....	....	2	166	2	121	35	400	435	100.0

During the year, 1,245 doses of arsenobenzene compounds were supplied in 59 instances to 20 individual medical practitioners (other than at treatment centres).

XIV.—MATERNITY AND CHILD WELFARE.

Notification of Births and Still-births.—The following statement shows the numbers of births and still-births notified as having occurred in Cardiff during 1934 :—

	<i>Births.</i>		<i>Still-births.</i>	
By Medical Practitioners	44	....	1
By Midwives	2,467	....	110
By Queen's Institute of District Nursing	488	....	11
By Parents	8	....	—
From Cardiff Royal Infirmary	618	....	68
From City Lodge Hospital	192	....	27
Totals	3,817*	....	217†

Child Welfare Centres.—The following is a record of the attendances at the 10 child welfare centres :—

Number of Sessions	ATTENDANCES					Average Attendance at each Session
	Children under 1 year		Children 1 year to 5 years		Total	
	First	Subsequent	First	Subsequent		
680	2,251	21,459	335	8,435	32,480	48

The total number of children who attended at the centres during the year was as follows :—

Children under 1 year at end of year ....	....	2,091
Children between 1 year and 5 years at end of year ....	....	2,752
Total ....	....	4,843

The following tabular statement shows the conditions found by medical officers in 2,072 infants under one year and 343 children between one and five years who were examined for the first time during 1934 and also the diseases or defects discovered subsequent to first examination :—

* Including 355 not belonging to Cardiff.

† " 47 " " " " "

	Examined for first time		Diseases or Defects found in Children not attending for the first time	
	Under 1 year	1 year and over	Under 1 year	1 year and over
Number examined :—				
Normal	1,421	105	...	...
Individual cases found with Diseases or Defects	651	238	...	...
Diseases or Defects found :—				
Injury at Birth	7	...	...	...
Congenital Malformation or Defect	50	8	7	5
Prematurity	45	...	3	...
Congenital Debility	24	1	2	1
Malnutrition (cause not specified) or Debility (not congenital)	91	8	39	58
Anaemia (cause not specified)	8	1	46	27
Diseases or Defects of :—				
Skin (Non-syphilitic) :				
Systemic	39	7	128	85
Contagious	8	12	66	103
Irritative	51	5	192	83
Eye : Ophthalmia Neonatorum	23	1	5	3
Squint .....	...	17	9	27
Other	18	10	49	52
Ear : Otorrhoea	10	7	64	71
Other	1	2	12	29
Nose and Throat :				
Enlarged Tonsils and/or Adenoids	1	20	8	89
Other	14	7	73	46
Heart and Circulation : Congenital	1	...	1	2
Rheumatic .....	...	2	...	2
Other	1	...	4	7
Respiratory System (non-tuberculous)	53	14	405	154
Digestive System : Hernia—Umbilical	80	2	52	8
Other	12	2	21	17
Other Diseases	138	19	748	236
Nervous System : Chorea .....	...	...	2	1
Other	3	8	7	26
Genito-urinary System : Phimosis	49	6	35	14
Other	13	6	19	41
Tuberculosis : Pulmonary—				
Definite .....	...	1	2	...
Suspected .....	...	1	...	1
Non-Pulmonary .....	...	...	1	3
Defective Teeth .....	...	89	9	297
Rickets	7	11	13	27
Other Deformities	12	18	38	50
Rheumatism (not Cardiac or Nervous) .....	...	1	1	3
Syphilis	2	...	...	1
Other Diseases or Defects	14	8	29	67

Ante-natal and Post-natal Clinics.—The record of attendances at the 5 ante-natal clinics is given in the following statement :—

Number of Sessions	ATTENDANCES					Average Attendance at each Session,
	Expectant Mothers		Post-natal Cases		Total	
	First	Subsequent	First	Subsequent		
377	1,669	5,428	73	49	7,219	19

In the following table the number of notified births (live and still) belonging to Cardiff and the number of expectant mothers who attended the ante-natal clinics for the first time during each of the years 1932 to 1934 are given. The table also shows the percentages of notified births represented by the attendances of expectant mothers, as compared with the corresponding percentages for England and Wales.

	1932	1933	1934
(a) Total number of notified births (live and still)	3,754	3,576	3,632
(b) Number of expectant mothers who attended the ante-natal clinics	1,466	1,418	1,669
(c) Percentage of notified births represented by (b)	39·0	39·6	45·9
(d) Corresponding percentage for England and Wales	37·6	40·8	42·1

An analysis of expectant mothers who attended the ante-natal clinics for the first time and who were confined during 1934 is given below.

Miscarriages occurred in 21 instances and still-births in 30. Seven of the women died from puerperal causes. Twin births occurred in 14 instances.

Type of case :—

Primipara	....	....	....	....	469
Multipara	....	....	....	....	1,014
Total	....	....	....	....	1,483

Of these 1,483 women, 736 were found to be suffering from 983 diseases, abnormalities or defects, as follows :—

Abnormalities of the thyroid gland	....	....	....	20
Albuminuria	....	....	....	101
Anaemia	....	....	....	17
Conditions requiring caesarean section	....	....	....	12
" " induction	....	....	....	3
" " version	....	....	....	18
Contracted pelvis	....	....	....	43
Debility	....	....	....	9
Dental defects requiring treatment	....	....	....	384
Foetal abnormality	....	....	....	1
Haemorrhage	....	....	....	31
Haemorrhoids	....	....	....	4
Heart conditions	....	....	....	11
Hydrometra	....	....	....	7
Malnutrition	....	....	....	2
Oedema	....	....	....	59
Phlebitis	....	....	....	1
Pyelitis	....	....	....	8
Respiratory diseases	....	....	....	9
Skin diseases	....	....	....	6
Vaginal discharge	....	....	....	136
Varicose veins	....	....	....	66
Vomiting	....	....	....	29
Other diseases	....	....	....	6

Total 983

Place of confinement :—

Private dwelling-houses	....	....	....	702
Maternity Hospital (Cardiff Royal Infirmary)	....	....	....	566
City Lodge Hospital	....	....	....	106
Private Maternity Homes	....	....	....	25
Outside Cardiff	....	....	....	59
Not traced	....	....	....	25
Total				1,483

Since June, 1925, pregnant women attending the ante-natal clinics have been subjected to a blood examination for syphilis, viz., the Wassermann reaction. During 1934 such routine tests were made in 1,213 cases, of which 20, or 1·6 per cent., were found to be positive.

A special weekly post-natal session was commenced on 6th March, 1934, at the clinic at 10, Glossop Terrace. During the first six months the cases seen during these post-natal sessions were women who had been confined at the Maternity Branch of the Cardiff Royal Infirmary, but later arrangements were made for other cases found to be presenting any abnormality, who were attending other clinics, also to be referred for examination during these special sessions.

The following is a record of attendances at the special post-natal sessions to the end of 1934 :—

Number of Sessions	ATTENDANCES			Average Attendance at each Session
	First	Subsequent	Total	
36	228	36	264	7

An analysis of 293 post-natal cases dealt with (including cases that had been dealt with at ante-natal clinics prior to the commencement of the special session) is given below.

Type of case :—

Primipara	....	....	....	....	142
Multipara	....	....	....	....	151
Total					293

Pregnancy :—

Normal	....	....	....	....	222
Abnormal	....	....	....	....	71
Total					293

Labour :—

Normal	....	....	....	....	221
Abnormal	....	....	....	....	36
Forceps delivery	....	....	....	....	36
Total					293

Of these 293 cases, 66 were found to be suffering from 210 diseases, abnormalities or defects, as follows :—

Albuminuria	....	....	....	....	1
Anaemia or malnutrition	....	....	....	....	10
Constipation—severe	....	....	....	....	2
Laceration of cervix or perineum	....	....	....	....	11
Oedema	....	....	....	....	3
Phlebitis	....	....	....	....	5
Prolapse	....	....	....	....	18
Retroversion	....	....	....	....	44
Sub-involution	....	....	....	....	22
Vaginal discharge and erosion	....	....	....	....	92
Other	....	....	....	....	2
Total					210

Maternity Hospitals.—The number of expectant mothers admitted to the Maternity Hospital (Cardiff Royal Infirmary) was as follows :—

Complicated cases sent by General Practitioners	....	52
Cases admitted through Ante-natal Clinics	....	468
Total	....	520

Arrangements were made as from 1st January, 1934, for expectant mothers attending the ante-natal clinics to be admitted when necessary to the City Lodge Hospital for confinement, the Health Committee bearing the net cost of their maintenance. The number of cases admitted to the institution under these arrangements during the year was 94.

Maternity and Nursing Homes.—At 31st December, 1934, there were 19 registered nursing homes, 10 providing for maternity cases only, 5 providing for surgical and/or medical cases only and 4 providing for both maternity and other cases. The total number of beds in these nursing homes was 141, of which 66 were available for maternity cases.

Extra-Domiciliary Confinement.—The number and proportion of births and still-births belonging to Cardiff and registered in Cardiff as having occurred away from private dwelling-houses during 1934 are given below :—

Place of Birth	Number	Number per 1,000 Total Births
Cardiff Royal Infirmary	505	137
City Lodge Hospital	185	50
Private Nursing and/or Maternity Homes	261	71
Totals	951	258

Dental Clinics.—The following is a record of the work carried out in connection with maternity and child welfare at the dental clinics :—

	Mothers	Children	Totals
Inspected	359	371	730
Treated	355	351	706
Attendances :—			
For inspection	417	371	788
For treatment	1,431	417	1,848
Teeth extracted	3,613	1,428	5,041
Teeth filled	15	27	42
Dressings	28	5	33
Scalings	31	...	31
Anaesthetics administered :—			
General	526	390	916
Local	69	...	69
Supplied with dentures	202	...	202
Dentures supplied :—			
Full upper	182	...	182
Partial upper	7	...	7
Full lower	164	...	164
Partial lower	9	...	9

Domiciliary Visits by Health Visitors.—The following is a summary of the visits made by the health visitors in connection with maternity and child welfare :—

Births—First visits	3,178
Births and infant deaths—Combined visits.	89
Infant death investigations	99
Still-birth investigations	141
Subsequent visits	<div> <div> Infants under one year Children over one year </div> <div> 6,964 9,971 </div> </div>
Ante-natal cases	<div> <div>First visits Re-visits</div> <div>120 60</div> </div>
Infectious Diseases :—	
Ophthalmia neonatorum	<div> <div>First visits Re-visits</div> <div>27 74</div> </div>
Puerperal fever	<div> <div>First visits Re-visits</div> <div>16 2</div> </div>
Measles	<div> <div>First visits Re-visits</div> <div>327 27</div> </div>
Whooping cough	<div> <div>First visits Re-visits</div> <div>304 10</div> </div>
Mumps	<div> <div>First visits Re-visits</div> <div>13 —</div> </div>
Financial inquiries	934
Other visits	5,496
Total	27,852

Milk for Mothers and Infants.—Milk was supplied free of charge in necessitous cases and on medical certificates to the following extent :—

	Fresh Milk— Grade A (T.T.)		Dried Milk	
	Applications for a month's supply	Pints granted	Applications for a month's supply	Pounds granted
Infants	1,319	41,600	510	3,069
Expectant Mothers	313	9,490	...	...
Nursing Mothers	1,065	32,455	...	...
Totals	2,697	83,545	510	3,069

Midwives Practising in Cardiff.—The number of midwives who gave notice of intention to practise in Cardiff during the year was 121. They are classified as follows:—

According to qualifications :—

<i>Bona fide</i>	8
Certificate of Central Midwives Board	113
Total	121

According to type of practice :—

Attached to public institutions	36
Conducting private nursing or maternity homes	16
Dealing with less than five cases per annum	18
Monthly nurses	5
Others	46
Total	121

Officers of the department made 130 visits of inspection of midwives, and midwives' appliances, etc., were disinfected in 13 instances.

The following is a record of the practice of midwives in Cardiff during the year in relation to the births which were the subject of visits by the health visitors :—

Attendances at births by midwives* as ascertained by health visitors :—

(a) Alone	1,431
(b) With a medical practitioner :—	
(i) Medical practitioner engaged	512
(ii) Medical practitioner called in emergency	683

Attendances at still-births by midwives* :—

(a) Alone	28
(b) With a medical practitioner :—	
(i) Medical practitioner engaged	30
(ii) Medical practitioner called in emergency	55

*Other than those engaged in midwifery at the Cardiff Royal Infirmary and the City Lodge Hospital.

Medical Practitioners called in by Midwives in Emergency.—During the year the number of instances in which medical practitioners were called in by midwives in emergency was 1,194, and claims for emergency fees were made by practitioners in 905 cases. The fees claimed totalled £1,385 14s. 6d. and in 148 instances fees amounting to £162 16s. 10d. were reclaimed from the responsible persons. The sum actually recovered during the year was £133 11s. 2d.

The following statement gives the reasons for medical help being summoned by midwives :—

(1) MOTHER.—

(a) *Pregnancy*—

Miscarriage (including abortion)	....	....	99
Haemorrhage	....	....	10
Albuminuria and oedema and other toxic causes			27
Other causes	....	....	35
			— 171

(b) *Labour*—

Abnormal presentation	....	....	59
Premature labour	....	....	27
Obstructed and delayed labour	....	....	394
Placenta praevia, ante-partum haemorrhage and eclampsia, and other toxic causes	....	....	60
Post-partum haemorrhage and retained and adherent placenta	....	....	38
Ruptured perineum	....	....	161
Other causes	....	....	19
			— 758

(c) *Lying-in*—

Pyrexia, secondary post-partum haemorrhage and phlegmasia and other septic causes	....	....	53
Other causes	....	....	34
			— 87

(2) INFANT—

Debility	....	....	50
Inflammation of or discharge from eyes	....	....	53
Other causes	....	....	75
			— 178

Total	1,194
-------	------	------	-------

Puerperal Fever and Puerperal Pyrexia.—Statistics as to the number of cases of puerperal fever and puerperal pyrexia notified during the year are given in the section dealing with notifiable diseases (page 16), but as the work involved comes within the province of maternity and child welfare it is referred to here. Fifty-eight cases of puerperal fever and 51 cases of puerperal pyrexia were notified. General practitioners sought the assistance of the department in several cases, and one specialist consultation took place.

Home Nursing.—The following is a record of the work done by the Queen's Institute of District Nursing for the maternity and child welfare section of the department :—

Disease or Defect	Cases carried over from 1933		Cases referred for Treatment during 1934		Totals	
	Cases	Visits	Cases	Visits	Cases	Visits
Skin :—Impetigo	3	24	17	387	20	411
Other Skin Diseases	1	6	5	85	6	91
Eye :—Ophthalmia and Ophthalmia Neonatorum	1	5	26	618	27	623
Other Eye Defects	1	53	69	776	70	829
Minor Ear Defects	1	41	17	218	18	259
Miscellaneous	4	101	86	966	90	1,067
Totals	11	230	220	3,050	231	3,280

Maternity Bags.—Maternity bags were lent by the department in 11 necessitous cases.

Home Helps.—Home Helps were provided by the department in 168 cases in which mothers confined at home were without adequate domestic help and without means of obtaining it.

Crippling Defects and Orthopaedics.—The following is a summary of the work carried out at the orthopaedic clinic during 1934 :—

<i>Consultation Clinic :—</i>	<i>Children under School Age.</i>
Examined for first time	150
Recommended for treatment and/or appliances for first time	78
Recommended for further treatment and/or appliances	74

Recommendations for :—

Treatment in Hospital	8
Treatment at Clinic (Special and Routine)	67
Appliances	16
Alterations to appliances	2
Special boots	3
Alterations to boots	65
Other forms of treatment	1
Treated at Clinic for first time	27
Attendances at Clinic	480

Routine Treatment (massage, electricity, exercises, etc.) :—

Treated at Clinic for first time	50
Attendances for routine treatment	1,105

The following statement relates to treatment at and provision of appliances, etc., through the Prince of Wales' Hospital, Cardiff, during 1934 :—

Hospital Treatment :—

*Children under
School Age.*

Admitted to Prince of Wales' Hospital:—

(a) Day cases	—
(b) Other cases	18
Under treatment at Prince of Wales' Hospital at end of 1934	4
On Prince of Wales' Hospital waiting list at end of 1934 :—	
(a) Day cases	—
(b) Other cases	1

Other treatment or provision (including appliances, etc., provided following hospital treatment) :—

Appliances provided	25
Appliances altered	6
Special boots provided	—
Alterations to boots	48
Other forms of treatment provided	8

The diseases or defects found in children examined for the first time during the year have been classified as follows :—

<i>Diseases or Defects.</i>	<i>Number.</i>
Flat feet	18
Bow legs	22
Talipes	26
Rickets	12
Acute anterior poliomyelitis	1
Spastic paralysis	5
Congenital malformation or deformity	8
Congenital dislocation of hip	2
Torticollis	9
Knock knee	14
Metatarsus varus and intoeing	13
Coxa vara	2
Other defects	18
Total	150

The following is a classification of the cases discharged during the year :—

<i>Reason.</i>	<i>Number.</i>
Cured	71
Improved	5
Unlikely to benefit further	2
Left the district	3
Other reasons (including trivial defects)	38
Total	119

Nose and Throat Defects.—The following is a summary of the work done in connection with the treatment of children under school age suffering from enlarged tonsils and/or adenoids :—

Examined at Clinic for first time	....	....	....	123
Received operative treatment at Llandough Hospital	....	....	....	15
Received other forms of treatment at Clinic	....	....	....	38
Total attendances at Clinic	....	....	....	282

Visual Defects.—The following statement summarises the work done in connection with the examination of visual defects in children under school age :—

Attended Clinic for first time	....	....	....	57
Examined for errors of refraction	....	....	....	47
For whom spectacles were prescribed	....	....	....	46

For whom spectacles were provided :—

(a) By parents	....	....	....	32
(b) By Council free of charge	....	....	....	8
Treatment for other eye defects prescribed and provided	....	....	....	20
Total attendances at Clinics	....	....	....	193

Measles.—The hospital treatment of cases of measles under five years of age is undertaken as part of the maternity and child welfare scheme of the Council. Particulars as to the cases admitted to hospital during 1934 are contained in the report on the Isolation Hospital (page 23).

Venereal Diseases.—Tabular statements relating to the work of the special treatment centre for mothers and children are included in the section dealing with venereal diseases (page 62).

Radiography.—The number of individual cases referred from the maternity and child welfare centres for radiography was 101, the total number of radiograms taken being 121. The parts of the body that required X-ray examination in the 101 cases were as follows :—

Shoulder	....	....	....	....	2
Arm	....	....	....	....	1
Elbow	....	....	....	....	1
Wrist	....	....	....	....	80
Hand	....	....	....	....	2
Hip	....	....	....	....	12
Knee	....	....	....	....	2
Thigh	....	....	....	....	3
Leg	....	....	....	....	2
Foot	....	....	....	....	5
Skull	....	....	....	....	2
Total					112

Artificial Sunlight Treatment.—The number of children under five years of age treated by artificial sunlight for the first time and their ailments are shown in the following table :—

<i>Diseases.</i>	<i>Children.</i>
Debility	8
Nervous Debility and/or Malnutrition	3
Bronchial catarrh	3
Rickets	24
Other diseases	7
Total	45

The total number of attendances of children for treatment was 645. Thirty-seven expectant mothers also received treatment for the first time, the total number of attendances being 295.

Infant Life Protection.—The following statement gives particulars of the numbers of persons and children registered at the end of 1934 and visits by the visitor specially engaged in this work during the year :—

Persons on the register who were receiving children for reward at the end of the year	72
---	----

Children on the register :—

(a) At the end of the year	78
(b) Who died during the year	—
First visits	23
Routine visits	723

Special visits :—

(a) Illegitimate infants	2
(b) Others	173

Legal proceedings were taken against a foster-mother for failing to give notice of change of address on two occasions, as required by the Children and Young Persons Acts, and a fine of 10/- in each case was imposed.

Adoption of Children Act, 1926.—The visitor specially engaged in duties in connection with infant life protection dealt with 22 cases during the year in which the Council acted as guardian *ad litem*.

XV.—LABORATORY WORK.

Cardiff and County Public Health Laboratory.—The numbers of specimens and samples examined during 1934 for Cardiff were as follows :—

Bacteriological Examinations :—

Water Supplies	....	....	....	276
Milks for Tubercle Bacilli	....	....	....	378
Milks for General Examination	....	....	....	997
Ice Creams for General Examination	....	....	....	85
Sputa for Tubercle Bacilli	....	....	....	1,065
Urines for Tubercle Bacilli	....	....	....	21
Rodents for Plague	....	....	....	488

Specimens for :—

Diphtheria	....	....	....	3,270
Enteric Fever (Serum)	....	....	....	40
Enteric Fever (Other Specimens)	....	....	....	24
Dysentery	....	....	....	104
Food Poisoning Organisms	....	....	....	52
Gonorrhoea	....	....	....	529
Syphilis (Wassermann Reaction)	....	....	....	3,026
Syphilis (Spirochaeta Pallida)	....	....	....	10
Ringworm	....	....	....	1
Cerebro-Spinal Fluids	....	....	....	31
Other Examinations	....	....	....	171

Chemical Examinations :—

Water Supplies	....	....	....	201
Milks and Milk Products	....	....	....	125
Ice Creams	....	....	....	85
Air of Cinemas	....	....	....	11
In connection with Atmospheric Pollution	....	....	....	45
In connection with Ultra-Violet Radiation	....	....	....	366
Other Examinations	....	....	....	12
Total	....	....	....	11,413

The numbers of specimens examined for suspected disease in patients resident in Cardiff, together with the results, are shown below :—

Suspected Disease	Positive Results	Negative Results	Totals	Percentage of Positive Results
Diphtheria	1,233	2,037	3,270	37.7
Enteric Fever	2	62	64	3.1
Tuberculosis (Respiratory)	325	740	1,065	30.5
Gonorrhoea	71	458	529	13.4
Syphilis—				
Wassermann Reaction	297	2,729	3,026	9.8
Spirochaeta Pallida	4	6	10	40.0

XVI.—FOOD INSPECTION.

Meat Inspection at Municipal Abattoirs.—The following tables set out in detail the work done in connection with meat inspection during the year.

Animals slaughtered and whole carcasses found diseased which were surrendered and destroyed or otherwise dealt with by arrangement with the owners :—

	ROATH ABATTOIR		CANTON ABATTOIR		TOTALS	
	Slaughtered	Diseased or unsound and destroyed	Slaughtered	Diseased or unsound and destroyed	Slaughtered	Diseased or unsound and destroyed
Bulls	41	4	39	1	80	5
Cows	378	22	171	18	549	40
Heifers	2,341	11	537	11	2,878	22
Steers	1,629	6	573	4	2,202	10
Calves	9,895	27	1,208	16	11,103	43
Sheep and lambs	33,923	42	15,731	101	49,654	143
Pigs	21,351	91	6,875	69	28,226	160
Totals	69,558	203	25,134	220	94,692	423

Instances in which tuberculosis was found :—

	ROATH ABATTOIR		CANTON ABATTOIR		TOTALS	
	Number	Percentage	Number	Percentage	Number	Percentage
Cattle:—						
Bulls	15	36·58	15	38·46	30	37·50
Cows	132	34·92	113	66·08	245	44·62
Heifers	112	4·78	47	8·75	159	5·52
Steers	64	3·93	45	7·85	109	4·95
Calves	24	0·24	11	0·91	35	0·31
All Cattle	347	2·43	231	9·14	578	3·44
Pigs	288	1·35	235	3·42	523	1·85

Causes of destruction of carcasses :—

Cause	Beef	Veal	Mutton and Lamb	Pork	Totals
Tuberculosis	69	20		99	188
Dropsy			25	3	28
Emaciation	3	3	34	1	41
Dropsy and emaciation			48	1	49
Johne's Disease	1				1
Moribund			2		2
Found dead					
Decomposition					
Other Causes	5	19	34	56	114
Totals	78	42	143	160	423

Approximate weight of diseased or unsound meat surrendered and destroyed or otherwise dealt with by arrangement with the owners :—

Carcases of—					Tons	cwt.	lb.
Beef	....	....	....	....	21	0	90
Veal	....	....	....	....	1	4	34
Mutton and lamb	....	....	....	....	2	5	90
Pork	....	....	....	....	6	5	2
Part carcases of—							
Beef	....	....	....	....	1	7	54
Veal	....	....	....	....	—	1	3
Mutton and lamb	....	....	....	....	—	1	59
Pork	....	....	....	....	1	6	46
Offal of—							
Beasts	....	....	....	....	17	7	23
Calves	....	....	....	....	—	9	15
Sheep and lambs	....	....	....	....	4	9	63
Pigs	....	....	....	....	4	6	82
Total					60	5	1

Meat Inspection at Private Slaughter-houses.—The numbers of animals slaughtered were as follows :—

Sheep and lambs	....	....	....	....	255
Pigs	....	....	....	....	3,578
Total	....	....	....	....	3,833

Tuberculosis was found in carcases of pork in 177 instances, the proportion being 4·94 per cent. Eleven unsound carcases of pork were destroyed, the cause in 9 instances being tuberculosis ; in the other two instances the causes were swine fever and suffocation respectively.

The total weight of unsound meat surrendered at private slaughter-houses and destroyed by arrangement with the owners was 1 ton 15 cwt. 42 lb.

Unsound Food Exposed or Intended for Sale.—The following is a record of the work done by the sanitary inspectors in connection with inspection of food exposed or intended for sale during the year :—

	Number of Inspections.	
Butchers' shops	3,562
Provision shops	234
Markets	336
Wholesale stores	2,020
Fish and fruit shops	519
Butter factories	122
Margarine stores (wholesale)	85
Ice cream premises and barrows	678
Fried fish shops	331
Food vehicles	37
Railway stations	14
Restaurants	206
Other premises	195
Total	8,339

Approximate weight of diseased or unsound food found in shops and stores and destroyed or disposed of by the owners otherwise than as food for human consumption :—

	Tons	cwt.	lb.
Beef	—	11	90
Veal	—	—	71
Mutton and lamb	—	—	39
Pork	—	1	57
Offal	1	9	82
Fish	4	1	3
Poultry	—	3	36
Rabbits	—	—	21
Ham and bacon	2	3	99
Butter and margarine	—	4	76
Other provisions	6	17	96
Fruit	—	2	27
Sweets	—	—	28
Total	15	17	53

Meat Hawkers.—Sixteen certificates for one year were granted under Section 108 of the Cardiff Corporation Act, 1930, to persons not keeping butchers' shops in the city, who desired to sell meat or meat products from vehicles, baskets or barrows, after the approval of the storage accommodation provided.

Milk Inspection.—The following is a statement showing the distribution of the milk business in Cardiff in June, 1934 :—

Character of Business	Number of Vendors	
	Totals	Selling 6 gallons or less per day
(1) From retail premises other than shops, with or without rounds	54	6
(2) By rounds direct from farms within the city boundary	19	2
(3) By rounds direct from farms or premises beyond the city boundary	125	14
(4) From shops (not entirely bottled milk) with or without rounds	90	63
(5) From shops (bottled milk only)	371	371
(6) By rounds only	144	20
Totals	803	476

The approximate number of gallons of milk sold per day by all vendors was 11,005, a decrease of 730 gallons compared with the quantity sold per day in June, 1933. Included in the total quantity sold per day in June, 1934, were 4 gallons of Certified milk, 539 gallons of Grade A (T.T.) milk, 20 gallons of Grade A milk and 736 gallons of Pasteurised milk.

Veterinary Inspection of Cows.—The Veterinary Officer usually examines all cows on dairy farms within the city monthly. The following information is compiled from the reports which he submitted:—

Month	Dairymen whose Premises were visited	Visits	Cows in Milk		Cows excluded from Dairy Herds	Cows not in Milk	
			Examined	Found diseased		Examined	Found diseased
January	29	29	373	34	9	90	....
February	29	37	370	45	4	110	....
March	29	40	310	39	5	85	....
April	29	36	382	35	4	83	....
May	29	36	385	37	5	71	....
June	29	37	374	33	4	70	....
July	29	33	381	28	.....	63	....
August	29	36	391	35	8	63	1
September	14	14	235	21	1	32	....
November	29	39	374	14	1	58	2
December	28	34	377	16	2	73	....

Five cows affected with tuberculosis were slaughtered during 1934 in terms of the Tuberculosis Order, 1925.

The Veterinary Officer occasionally accompanies the officers of other local authorities when examining cows at farms situated outside Cardiff from which milk sold in Cardiff is found to contain tubercle bacilli. During 1934 he made 4 such visits and examined 75 cows in milk and 2 cows not in milk. Of the 75 cows in milk examined, 19 were found to be diseased, and three were excluded from dairy herds as the result of clinical examination.

Tubercle Bacilli in Milk.—The number of routine samples of milk examined for the presence of tubercle bacilli was 278, of which 6, or 2·2 per cent., were found to be positive. The percentage of samples in which tubercle bacilli were found during the ten years 1924-1933 was 4·6. The milk was produced outside Cardiff in 5 of the cases in which tubercle bacilli were found during 1934, and the action prescribed under Section 4 of the Milk and Dairies (Consolidation) Act, 1915, was taken in each case.

Routine Bacteriological Examination of Milk.—The following is a record of the bacteriological examination of ordinary commercial milk carried out during 1934, the results being shown in such a way as to reveal the proportion which attained the standard prescribed by the Milk (Special Designations) Order, 1923, for Grade A milk:—

Period	Number of Samples examined	Number containing not more than 200,000 bacteria in 1 c.c.	Number with <i>B. Coli</i> absent in 1/100 c.c.	Number attaining Grade A standard by both tests	Percentage attaining Grade A standard
January—May	148	127	132	121	82
June—August	70	44	39	35	50
September—December	119	107	82	81	68
Totals	337	278	253	237	70

Graded Milks.—The following is a statement of the number of licences for the various grades of milk and the number of individual dealers under the Milk (Special Designations) Order, 1923, each year since 1923 :—

Description	Number on 31st December											
	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
(1) Producers' licences to use the designation "Grade A"		1	1	1	1	1	1	1	4	2	2	2
(2) Dealers' licences to use the designation "Certified"				2		2	2	4	2	2	2	3
(3) Dealers' licences to use the designation "Grade A (Tuberculin Tested)"—												
(a) Bottling establishments				3	5	17	21	24	24	23	22	25
(b) Shops						17	25	26	25	28	31	28
(c) Supplementary					1	1	1	1	1	6	8	8
(4) Dealers' licences to use the designation "Grade A"—												
(a) Bottling establishments	3	3	6	6	9	2	2		3	3	2	2
(b) Shops				2	8	2					2	2
(c) Supplementary		2	2	2	1	1	3	3	3	3	2	1
(5) Dealers' licences to use the designation "Pasteurised"—												
(a) Pasteurising establishments	1	1	1							2	2	5
(b) Shops											13	17
(6) Individual dealers—												
(a) Licensed to use the designation "Certified"				2		2	2	4	2	2	2	3
(b) Licensed to use the designation "Grade A (Tuberculin Tested)"				3	6	35	47	51	50	57	61	61
(c) Licensed to use the designation "Grade A"	3	5	8	10	18	5	5	3	6	6	6	5
(d) Licensed to use the designation "Pasteurised"	1	1	1							2	15	22

The following tables show the proportion of samples of Grade A and Grade A (Tuberculin Tested) milk which conformed with the standard laid down by the Order. In every instance of a sample being below standard steps were taken to ascertain the cause and to effect an improvement.

(a) Samples from Producers' Supplies (before bottling).

Period	Number of Samples examined	Number containing not more than 200,000 bacteria in 1 c.c.	Number with <i>B. Coli</i> absent in 1/100 c.c.	Number attaining Grade A standard by both tests	Percentage attaining Grade A standard
January —May	17	17	16	16	94
June—August	46	36	31	29	63
September—December	10	10	10	10	100
Totals	73	63	57	55	75

(b) Samples from Dealers' Supplies (after bottling).

Period	Number of Samples examined	Number containing not more than 200,000 bacteria in 1 c.c.	Number with <i>B. Coli</i> absent in 1/100 c.c.	Number attaining Grade A standard by both tests	Percentage attaining Grade A standard
January—May	185	180	179	176	95
June—August	133	98	90	80	60
September—December	177	165	158	150	85
Totals	495	443	427	406	82

In addition, 11 samples of Certified milk and 83 samples of Pasteurised milk were examined, one of the former and eight of the latter being reported to be below the prescribed standards.

Ice Cream.—Eighty-four samples of ice cream were submitted for bacteriological and chemical examination, the results of which were as follows :—

Number of Bacteria per c.c. :—	Number of Samples.
Under 100,000	48
100,000—200,000	4
200,000—500,000	11
500,000—1,000,000	10
Over 1,000,000	11
Presence of <i>Bacillus Coli</i> :—	
Absent in 1 c.c.	3
Present in 1 c.c.	29
„ „ 1/10 c.c.	18
„ „ 1/100 c.c.	17
„ „ 1/1,000 c.c.	12
„ „ 1/10,000 c.c.	5

Seventy-three of the samples contained starch and 19 contained gelatine.

Legal Proceedings.—The following is a summary of legal proceedings taken during the year in connection with food inspection :—

Acts, etc., under which Proceedings were taken	Number	Fined	Cautioned	To pay costs only	Dismissed	Withdrawn	Amount of Fines and Costs
Food and Drugs (Adulteration) Act, 1928	25	6	7	...	6	6	£ 14 s. 7 d.
Milk and Dairies Acts and Order	14	14	...	...	...	...	14 15 0
Merchandise Marks Act, 1926	12	7	...	5	...	...	7 11 0
Sale of Food Order, 1921	7	3	2	...	...	2	6 0 0
Public Health (Preservatives, etc., in Food) Regulations	6	1	1	...	4	...	5 4 0
Cardiff Corporation Act, 1934 (Sec. 47)	2	...	...	2	...	...	8 0
Totals	66	31	10	7	10	8	£48 5 6

Report for 1934 of Mr. S. Dixon, M.Sc., F.I.C., Public Analyst.

Food and Drugs (Adulteration) Act, 1928.—The total number of samples of food and drugs submitted for analysis under the Food and Drugs (Adulteration) Act, 1928, by the Sampling Officers of the Urban Sanitary Authority during the year was 1,450. This number represents 6·56 samples for each 1,000 of the population of the city. Eighty-seven, or 6·0 per cent., were returned as adulterated.

In the following table this percentage of adulterated samples is compared with the percentages for the previous five years and with those for the whole of England and Wales :—

Year	City of Cardiff			England and Wales		
	Number examined	Number adulterated	Percentage adulterated	Number examined	Number adulterated	Percentage adulterated
1929	1,006	20	2·0	133,584	7,260	5·4
1930	1,004	33	3·3	136,515	6,496	4·8
1931	1,141	46	4·0	136,169	6,324	4·6
1932	1,302	67	5·1	137,981	7,019	5·1
1933	1,486	60	4·0	138,171	7,601	5·5
1934	1,450	87	6·0	140,583	7,451	5·3

It will be seen that there has been a marked increase in the number of samples returned as adulterated. Although the percentage adulterated during this period is the highest recorded, it is only slightly above the percentage for the whole country and cannot be considered unduly high.

The number and nature of the articles examined and the number of each variety classed as adulterated are shown below :—

Description of Sample	Number Examined	Number Adulterated
Almond Oil	3	....
Almonds, Ground	2	....
Apples	3	....
Apricots, Dried	10	....
Arrowroot	2	....
Baking Powder	2	....
Barley, Pearl	18	6
Boric Ointment	2	....
Brandy	1	....
Butter	39	....
Camphorated Oil	6	....
Candied Peel	2	....
Cheese	4	....
Cider	4	....
Cinnamon, Ground	8	....
Cocoa	4	....
Coffee	8	....
Cream	22	....
Epsom Salts	2	....
Flour	2	....
Flour, Self-raising	4	....
Fruit Juices and Cordials	6	....
Gin	5	1
Ginger, Ground	6	....
Glauber's Salts	2	....
Iodine, Tincture of	4	....
Jam	9	2
Lard	2	....
Liquorice, Compound Powder of	2	....
Margarine	20	....
Milk	1,083	60
Milk, Condensed	5	....
Milk, Skimmed	19	....
Mint, Dried	16	5
Oatmeal	4	....
Pears	2	2
Peas, Canned	2	....
Pepper	10	....
Pepper, Cayenne	6	....
Raisins	9	2
Rice	10	....
Rice, Ground	6	....
Rum	4	2
Sago	5	1
Sardines, Canned	9	....
Sausages	6	1
Sultanas	10	....
Tea	8	....
Vinegar	18	5
Walnuts, Shelled	3	....
Whiskey	11	....
Totals	1,450	87

Details of the samples classified as adulterated are as follows :—

Article	Nature of Adulteration or Irregularity
Barley, Pearl	Contained 0·65% of talc.
Barley, Pearl	" 0·70% "
Barley, Pearl	" 0·85% "
Barley, Pearl	" 1·50% "
Barley, Pearl	Contained 160 parts of sulphur dioxide per million.
Barley, Pearl	Contained 5% of rice and infested with meal mites.
Gin	Being 36·4 degrees under proof.
Jam, Strawberry	Deficient of 5% of the minimum amount of soluble solids.
Jam, Blackcurrant	Deficient of 10% of the minimum amount of fruit.
Milk (3 samples)	4% of fat.
Milk (2 samples)	" 5% "
Milk (3 samples)	" 6% "
Milk	" 7% "
Milk (3 samples)	" 8% "
Milk (5 samples)	" 9% "
Milk (4 samples)	" 10% "
Milk (3 samples)	" 12% "
Milk	" 15% "
Milk (2 samples)	" 16% "
Milk	" 19% "
Milk	" 21% "
Milk	" 24% "
Milk	Approximately 3% of added water by freezing-point test.
Milk	" 3½% " " "
Milk	Deficient of 1% of non-fatty solids.
Milk (2 samples)	" 1½% " "
Milk (5 samples)	" 2% " "
Milk	" 2½% " "
Milk	" 3% " "
Milk (4 samples)	" 3½% " "
Milk (2 samples)	" 4% " "
Milk (8 samples)	" 5% " "
Milk	" 6% " "
Milk	" 7% " "
Milk	" 7½% " "
Milk	" 8% " "
Mint, Dried	Contained 15% of ailanthus leaves.
Mint, Dried	" 20% " "
Mint, Dried (2 samples)	" 50% " "
Mint, Dried	" 60% " "
Pears	Contained 3·5 parts of arsenic, expressed as arsenious oxide, per million, and 8 parts of lead, expressed as metallic lead, per million.
Pears	Contained 2·5 parts of arsenic, expressed as arsenious oxide, per million, and 5 parts of lead, expressed as metallic lead, per million.
Raisins	Contained an excess of 100 parts of sulphur dioxide per million.
Raisins	" " 150 " "
Rum	Being 35·5 degrees under proof.
Rum	" 37·3 " "
Sago	Consisted of tapioca.
Sausages	Contained 120 parts of sulphur dioxide per million. Presence of preservative not declared.
Vinegar	Deficient in acetic acid to the extent of 5%.
Vinegar	" " 17%.
Vinegar	" " 35%.
Vinegar	" " 36%.
Vinegar	" " 40%.

Note.—The freezing points (Hortvet) of the above 28 samples of milk which were deficient in non-fatty solids showed that the deficiencies were due to the presence of added water.

Milk.—Although there is no legal standard of quality laid down in this country for milk, the Sale of Milk Regulations, 1901, provide that milk containing less than 3 per cent. of fat and/or less than 8·5 per cent. of non-fatty solids shall be *presumed* to be not genuine until the contrary is proved. It is quite clear, therefore, that milk which falls below these limits is not necessarily adulterated, but it must not be assumed that when its composition is equal to or above that given in the Regulations, milk is necessarily genuine. The High Court has held that the only criterion of genuineness is whether the milk has been sold in the same condition in which it was given by the cows. If it is not, the milk is adulterated in spite of any apparent virtue in its composition. In the course of his judgment in the appeal case of *Hunt v. Richardson*, Mr. Justice Darling said, "I think that it makes it an offence to sell this (milk) not in its natural state, be it rich or poor, but with some alteration of its 'nature, substance or quality' due to the addition or subtraction of something."

The effect of the Sale of Milk Regulations, 1901, therefore, is to place on the vendor the onus of proof that a milk is genuine when its composition falls below the prescribed limits, but where milk is above these limits the prosecution must prove that adulteration has taken place. Though legal proceedings may be instituted on any sample the composition of which is below the presumptive limits of the Regulations, it is obviously undesirable that the vendor of milk which is naturally low in fat or non-fatty solids, should be required to attend the Court to prove there has been no interference with it, and in Cardiff no proceedings are taken unless there is a considerable accumulation of evidence to show that the milk was actually adulterated.

In order to distinguish as far as possible between milk which is poor naturally and that which has been rendered poor by adulteration or careless handling, it has been the practice for several years to trace milk suspected of being adulterated back to its source and to make careful comparison of the results of analysis of the original milk with those of the milk taken under supervision at the farm. The latter is known as an appeal-to-cow sample, and, in order that it may furnish useful evidence, it is essential that it should be obtained from the same cows, milked under the same conditions as when the original milk was obtained, and at the next possible corresponding (morning or evening) milking. Occasionally an appeal-to-cow sample is also of poor quality and of much the same composition as the original sample, and then no proceedings are taken. Such cases, however, are by no means as frequent as is sometimes represented, and in the large majority of cases such a discrepancy is found that it can only be inferred that the milk is not in the same condition as when given by the cows.

More recently, the Hortvet freezing-point test also has been used for the detection of added water. The freezing point is the most constant property of milk and there is now a very large volume of evidence that the freezing point of genuine milk determined by Hortvet's method is not nearer to zero than $-0\cdot53^{\circ}\text{C}.$ even when the non-fatty solids are very low. Since the freezing point of milk varies only within narrow limits, any substantial addition of water to milk can readily be detected, and the reliability of the test is now accepted in many Courts in this country.

During the year under review, 1,083 samples of milk were examined, of which 60, or 5·5 per cent., were returned as adulterated.

The two following tables show the average composition of all the milk samples examined during 1934 and for the six years 1929-1934. It will be observed from the first of these tables that even during the early summer months average milk has a composition well above the limits of the Sale of Milk Regulations.

Average Composition for each Month.

Month	1934				1929-1934			
	Number of Samples	Fat per cent.	Solids-not-fat per cent.	Total solids per cent.	Number of Samples	Fat per cent.	Solids-not-fat per cent.	Total solids per cent.
Jan.	71	3.83	8.79	12.62	335	3.74	8.80	12.54
Feb.	84	3.69	8.76	12.45	356	3.72	8.77	12.49
March	88	3.77	8.74	12.51	305	3.68	8.73	12.41
April	97	3.80	8.77	12.57	342	3.60	8.77	12.37
May	87	3.65	8.83	12.48	376	3.57	8.83	12.40
June	88	3.66	8.84	12.50	372	3.54	8.85	12.39
July	103	3.56	8.69	12.25	439	3.69	8.74	12.43
Aug.	87	3.73	8.81	12.54	368	3.70	8.80	12.50
Sept.	104	3.73	8.85	12.58	422	3.76	8.84	12.60
Oct.	118	3.95	8.87	12.82	432	3.97	8.90	12.87
Nov.	81	3.95	8.87	12.82	382	3.99	8.88	12.87
Dec.	75	4.00	8.76	12.76	344	3.84	8.81	12.65
Whole period	1,083	3.78	8.80	12.58	4,473	3.74	8.81	12.55

Average Composition of all Milk Samples, 1929-1934.

Year	Number of Samples	Fat per cent.	Solids-not-fat per cent.	Total Solids per cent.
1929	487	3.71	8.87	12.58
1930	519	3.69	8.90	12.59
1931	600	3.79	8.78	12.57
1932	797	3.72	8.81	12.53
1933	987	3.72	8.78	12.50
1934	1,083	3.78	8.80	12.58
1929-1934	4,473	3.74	8.81	12.55

It has been noted in previous reports that the average quality of graded milk samples has been above that of ordinary milk and this has been the case again during 1934, the difference in the fat content being even more marked than in the past.

Average Composition of Graded and Ordinary Milk, 1932-1934.

Year	Graded Milk				Ordinary Milk			
	Number of Samples	Fat per cent.	Solids-not-fat per cent.	Total Solids per cent.	Number of Samples	Fat per cent.	Solids-not-fat per cent.	Total Solids per cent.
1932	270	3.78	8.87	12.65	527	3.68	8.79	12.47
1933	465	3.79	8.80	12.59	522	3.65	8.76	12.41
1934	652	3.84	8.81	12.65	431	3.68	8.78	12.46
1932-34	1,387	3.82	8.81	12.63	1,480	3.67	8.78	12.45

Details of investigations made in respect of certain samples are given below.

Milk 367 was found to be deficient of 9 per cent. of fat when compared with the minimum limit of the Sale of Milk Regulations. The vendor obtained this milk from a farmer, and two days later a sample was taken from the farm at the time of delivery to the retailer. This was deficient of 4 per cent. of fat. An appeal-to-cow sample (398) taken for comparison contained 3.32 per cent. of fat, but in view of the fact that this milk was the product of only four cows which had been turned out to grass on the day before the appeal-to-cow sample was taken, it was considered inadvisable to take legal proceedings and the farmer was cautioned.

Two samples (559 and 575) obtained from different vendors contained only 2.71 per cent. and 2.68 per cent. of fat respectively. Appeal-to-cow samples were taken in respect of them and each was found to contain only 2.73 per cent. of fat. It was apparent that in both cases the original milk had been sold as produced by the cows and the farmers were informed of the poor quality of their milk.

Samples 745 and 746 obtained from a producer-retailer contained only 2.54 and 2.36 per cent. of fat respectively, and they were therefore deficient in this constituent to the extent of 15 per cent. and 21 per cent. when compared with the limit of 3.0 per cent. of fat given in the Regulations. The vendor was also retailing machine-skimmed milk at the time these samples were taken. An appeal-to-cow sample (750) obtained at the farm on the following day proved to be of excellent quality, containing 3.71 per cent. of fat, and on this basis the deficiencies in the original samples amounted to 30 and 36 per cent. respectively. Legal proceedings were instituted and the vendor was fined £5 and ordered to pay 16/6 costs.

An informal sample of pasteurised milk (826) obtained from a large dairy was found to contain 7.85 per cent. of non-fatty solids, showing a deficiency in this constituent of 7.5 per cent. The freezing point was -0.491°C . and indicated that this deficiency in solids-not-fat was due to the presence of added water. On the following day a formal sample was procured from the same source and this contained 3.63 per cent. of fat and 8.52 per cent. of non-fatty solids. Judged solely on the limits of the Sale of Milk Regulations, this milk would have been considered genuine, but as the freezing point was -0.523°C . the presence of approximately 3 per cent. of added water was indicated. It was ascertained that these two samples consisted of the mixed milk of three different producers, and on the same evening ten samples were taken from these producers at the time of delivery at the dairy. Two of four samples obtained from one of the producers yielded the following results:—

	Fat	Solids-not-fat	Ash	Freezing point (Hortvet)
No. 837	2.97%	8.13%	0.74%	-0.522°C .
No. 840	3.79%	7.89%	0.73%	-0.510°C .

while appeal-to-cow samples taken for comparison purposes had the following composition:—

	Fat	Solids-not-fat	Ash	Freezing point (Hortvet)
No. 857	3.21%	8.53%	0.77%	-0.538°C .
No. 858	3.27%	8.62%	0.77%	-0.543°C .

The above results indicated that samples 837 and 840 contained 4 per cent. and 7 per cent. of added water respectively. The farmer was prosecuted and on sample 840 he was fined £5 and required to pay 10/6 costs, the summons in respect of the other sample being withdrawn at the suggestion of the Stipendiary Magistrate.

A survey of the history of several samples of Grade A (T.T.) milk which were found to be of poor quality between the months of May and August revealed that, although they were retailed by different vendors, they were all obtained from the same producer. Steps were therefore taken to examine further samples from this source of supply, and in September an informal sample (1,014) obtained through a retailer was found to be deficient of 4 per cent. of non-fatty solids when compared with the limit of the Sale of Milk Regulations. In view of this result, on September 28th six formal samples were obtained in course of delivery from the producer to three retailers and a public institution, and examination of these indicated that three of them contained added water, the analytical data being :—

	Fat	Solids-not-fat	Ash	Freezing Point (Hortvet)
No. 1,097	4.21%	8.03%	0.71%	—0.501°C.
No. 1,100	4.21%	8.03%	0.71%	—0.501°C.
No. 1,098	4.21%	7.99%	0.70%	—0.495°C.

From the non-fatty solids and freezing points of these samples it was concluded that 1,097 and 1,100, which were identical in composition, contained 5 per cent. of added water and that 1,098 contained 6 per cent. of added water. For confirmation, two appeal-to-cow samples were procured which proved to be of excellent quality and to possess normal freezing points, thus :—

	Fat	Solids-not-fat	Ash	Freezing point (Hortvet)
No. 1,108	4.84%	8.84%	0.78%	—0.548°C.
No. 1,109	4.67%	8.80%	0.78%	—0.547°C.

The difference in composition between these and the original samples is very apparent. Later, the farmer visited the Chief Sanitary Inspector and stated that, as he did not know from which cows the milk complained of was obtained, he would like separate samples taken from each of the 34 cows in his herd. This was done on October 11th and the results of analysis are tabulated below :—

Milk from Individual Cows.

No.	Fat per cent.	Solids-not-fat per cent.	Ash per cent.	Freezing point (Hortvet) °C.
1,161	5.31	8.60	0.82	—0.556
1,162	3.98	9.00	0.73	—0.548
1,163	5.85	9.72	0.78	—0.550
1,164	4.35	8.64	0.81	—0.550
1,165	4.62	9.05	0.77	—0.553
1,166	3.96	6.88	0.83	—0.547
1,167	5.67	9.07	0.87	—0.550
1,168	4.29	7.87	0.80	—0.545
1,169	3.97	8.33	0.75	—0.546
1,170	4.40	8.56	0.76	—0.545

No.	Fat per cent.	Solids-not-fat per cent.	Ash per cent.	Freezing point (Hortvet) °C.
1,171	4.86	8.94	0.72	-0.543
1,172	4.59	9.31	0.93	-0.553
1,173	3.83	8.77	0.74	-0.545
1,174	4.67	8.77	0.72	-0.549
1,175	3.16	8.60	0.79	-0.544
1,176	4.26	8.81	0.80	-0.541
1,177	4.45	9.19	0.75	-0.554
1,178	4.72	9.21	0.76	-0.552
1,179	3.68	8.86	0.82	-0.554
1,180	2.71	8.89	0.73	-0.540
1,181	3.97	9.01	0.79	-0.549
1,182	4.40	9.58	0.74	-0.554
1,183	5.36	8.31	0.83	-0.557
1,184	0.43	6.34	1.03	-0.575
1,185	4.86	9.08	0.84	-0.545
1,186	4.03	8.97	0.79	-0.545
1,187	4.08	8.90	0.80	-0.551
1,188	3.75	7.73	0.74	-0.541
1,189	3.53	8.26	0.96	-0.555
1,190	4.95	8.54	0.75	-0.544
1,191	1.68	8.30	0.88	-0.552
1,192	4.19	8.88	0.77	-0.547
1,193	5.73	9.45	0.77	-0.550
1,194	4.32	8.73	0.76	-0.535

The non-fatty solids of these samples from the individual cows ranged from 6.34 per cent. to 9.72 per cent., and the freezing points from -0.535°C. to -0.575°C. The latter are normal figures for genuine milk and they illustrate the relative constancy of the freezing point of genuine milk even when its chemical composition is most abnormal, as in samples 1,166 and 1,184.

In most cases where the non-fatty solids of milk are low, this is due to a deficiency in lactose or milk sugar. The constituents responsible for the lowering of the freezing point of milk are lactose and the soluble mineral salts, and therefore, if the freezing point is to remain constant (this constancy of the freezing point of milk has a physiological explanation), there must be a balance established between the milk sugar and the mineral salts. Equal weights of milk sugar and mineral salts, however, do not produce the same depression; the mineral salts have a much greater effect. A small increase in the mineral salts will therefore balance a considerable deficiency in lactose, and it was therefore to be anticipated that in these samples that were low in non-fatty solids, the mineral content would be suitably increased. This was found to be the case:—

No.	Solids-not-fat per cent.	Ash per cent.	Freezing point (Hortvet) °C.
1,166	6.88	0.83	-0.547
1,168	7.87	0.80	-0.545
1,169	8.33	0.75	-0.546
1,183	8.31	0.83	-0.557
1,184	6.34	1.03	-0.575
1,188	7.73	0.74	-0.541
1,189	8.26	0.96	-0.555
1,191	8.30	0.88	-0.552

These results showed that the low non-fatty solids were accompanied in most cases by a relatively high ash figure and the freezing point remained normal. This was not so with samples 1,097, 1,098 and 1,100. In these cases the non-fatty solids

were low, the ash was low when compared with the ash of any of the samples taken at the farm, and the freezing points were much higher than those of any of the samples taken under supervision and higher than the maximum for genuine milk, thus :—

No.		Solids-not-fat per cent.		Ash per cent.		Freezing point (Hortvet)°C.
1,097	....	8.03	....	0.71	....	—0.501
1,100	....	8.03	....	0.71	....	—0.501
1,098	....	7.99	....	0.70	....	—0.495

Consideration of the results of analysis of these 34 samples therefore confirmed the view that samples 1,097, 1,098 and 1,100 were adulterated.

At his interview with the Chief Sanitary Inspector, the farmer produced certificates of an analyst who stated that, from the refraction of these three milks, he was strongly of opinion that they were genuine. This refraction test has been carefully examined and found to be of no value for differentiating between a naturally poor milk and a watered milk having the same composition, since, in general, the refractions will be of the same order. After very careful consideration by the Medical Officer of Health, the Chief Sanitary Inspector, the Prosecuting Solicitor and myself, it was decided that proceedings should be taken against the farmer in order to refute, in the strongest manner possible, the certificates of the analyst for the defence and the value of the test upon which his conclusions were based. When the case was opened, the farmer applied for one of the three samples to be referred to the Government Chemist for analysis, whereupon the Prosecuting Solicitor applied for the other two samples also to be sent. The Government Chemist confirmed the deficiencies in non-fatty solids, but was unable to apply the freezing-point test owing to the sourness of the samples. The subsequent hearing occupied two days, and evidence in support of my contentions was given by Mr. G. D. Elsdon, County Analyst for Lancashire, and Mr. John Evans, Public Analyst for Sheffield, York, etc. Evidence was also given by Mr. J. R. Nicholls of the Government Laboratory, who attended on subpoena, and three scientific witnesses appeared for the defence. The Stipendiary Magistrate, in giving his decision, said he accepted the scientific evidence as to the reliability of the freezing-point test for the detection of added water in milk, and the farmer was fined £3 (20/- on each summons) and ordered to pay £16 7s. 0d. towards the costs of the case. A full account of the proceedings appeared in the issues of the *British Food Journal* for March, April and May, 1935.

On October 11th milk 1,160 was found to be deficient in non-fatty solids to the extent of 2 per cent. when compared with the minimum limit of 8.5 per cent. laid down by the Sale of Milk Regulations. The freezing point of this sample, as determined by the Hortvet technique, was —0.503°C., which indicated that the deficiency was due to the presence of approximately 7 per cent. of added water. On November 22nd two further samples (1,315 and 1,316) were procured from the same vendor. Both were deficient of 5 per cent. of non-fatty solids and the freezing points again indicated that added water was present. These samples were obtained from a retailer who obtained his milk from a farmer, and on the evening of November 22nd a sample was procured from the farmer at the time of delivery to the retailer. This milk was of much the same composition as the samples taken from the retailer, the analytical data being :—

No.		Fat per cent.		Solids-not-fat per cent.		Freezing point (Hortvet)°C.
1,315—from retailer	....	4.18	....	8.06	....	—0.508
1,316—from retailer	....	4.18	....	8.06	....	—0.508
1,323—from farmer on delivery to retailer	....	4.25	....	8.05	....	—0.504

The farmer retailed some of the milk himself and two samples (1,330 and 1,331) taken from him on his round on November 24th had the following composition :—

No.			Fat per cent.		Solids-not-fat per cent.		Freezing point (Hortvet)°C.
1,330	....	....	4.20	....	8.00	....	—0.507
1,331	....	....	3.27	....	8.29	....	—0.517

The freezing points and low non-fatty solids again pointed to the presence of added water. An appeal-to-cow sample (1,334) taken the same evening (the above were all samples of evening milk) was of excellent quality and had a normal freezing point, thus :—

No.			Fat per cent.		Solids-not-fat per cent.		Freezing point (Hortvet)°C.
1,334	....	....	4.78	....	8.51	....	—0.540

These investigations showed that systematic adulteration had been taking place at the farm over a long period. The farmer was summoned and fined £5 and ordered to pay 9/- costs.

Sample of milk 1,277, taken from a retailer-producer, was deficient of at least 5 per cent. of fat. It was identical in composition with another sample which he sold as skimmed milk. Legal proceedings were taken and the vendor was fined £10 and ordered to pay £3 2s. 0d. costs, the Stipendiary Magistrate remarking that the case reeked with deception.

Milk 1,401 was sold from unregistered premises and for this offence the vendor was fined £1. This milk contained only 2.98 per cent. of fat and 8.02 per cent. of non-fatty solids, the freezing point being —0.507°C. The next morning sample 1,413 was procured from the retailer who supplied milk to the vendor of sample 1,401, and this contained only 7.81 per cent. of non-fatty solids and had a freezing point of —0.505°C., indicating that the milk contained added water. Two samples (1,420 and 1,421) were then obtained from the farmer who supplied this second retailer, and evidence of adulteration with water was again obtained. Arrangements were made with the Glamorgan County Council for samples to be obtained at the farm and, upon analysis of these, one of them was found to be deficient of 3.5 per cent. of non-fatty solids and to have a freezing point of —0.512°C., which indicated that the deficiency was due to extraneous water. It transpired that the arrangements at the farm could not be properly supervised by one man, and the Chief Sanitary Inspector arranged for four of his assistants to accompany the County Inspector and take further samples, both of which proved to be of good quality and in marked contrast with the results of the previous samples. After this second visit to the farm, the farmer consulted the Chief Sanitary Inspector, who advised him to keep a close watch on his servants, since there was a large tank of water outside the cowshed, and it is significant that in the following week the farmer was advertising for a reliable cowman and boy with good references. In view of this, no legal proceedings were taken.

These examples serve to show the value of the freezing-point test, for in every instance its indications have been amply confirmed as a result of the examination of appeal-to-cow samples. Its usefulness, however, is not confined to the detection of added water, for it is valuable in distinguishing samples which are naturally deficient in non-fatty solids. During the year, 14 samples of milk which were low in non-fatty solids (8.27 per cent. to 8.46 per cent.) were returned as genuine, since the freezing points were normal (—0.531°C. to —0.552°C.).

Since Sampling Officers can only take formal samples within the area of the Local Authority for which they act, neighbouring Authorities have been asked frequently to obtain appeal-to-cow samples, and their willing co-operation in this matter has been greatly appreciated.

Public Health (Preservatives, etc., in Food) Regulations.—No preservatives were found in any of the samples of milk, cream, butter or margarine. In the next table, the various articles in which preservatives were detected and the amounts present are shown :—

Article	Number Examined	Number containing Preservative	Preservative	Parts per million	
				Amount present	Maximum permitted
Apricots, Dried	10	10	Sulphur dioxide	360, 435, 470, 650, 720, 730, 760, 1,075	
Barley, Pearl	18	1	" "	1,250, 1,560	2,000
Cider	4	3	" "	160	Nil
Fruit Juices and Cordials	6	5	Sulphur dioxide 4	45, 110, 135	200
Jam	9	6	Benzoic acid 1	25, 125, 180, 315	350
Raisins	9	7	Sulphur dioxide	360	600
Sausages	6	2	" "	12, 20, 25, 35, 35, 40	40
Sultanas	10	4	" "	70, 180, 215, 360, 490, 850, 900	750
			" "	120, 130	450
			" "	210, 275, 340, 500	750

Legal Proceedings.—Legal proceedings were instituted in respect of 20 samples analysed during the year, and the total fines and costs imposed amounted to £60 16s. 0d. Three cases were dismissed upon warranties being proved. Particulars of the proceedings are as follows :—

No. of Sample	Article	Result of Analysis	Result of Prosecution
468	Barley, Pearl	Contained 160 parts per million of sulphur dioxide	Dismissed on warranty
470	Mint, Dried	Contained 15% ailanthus leaves	Fined 10/- & 10/6 costs
472	Mint, Dried	" 60% " "	Fined 10/- & 10/6 costs
473	Mint, Dried	" 50% " "	Dismissed on warranty
479	Mint, Dried	" 50% " "	" "
712	Vinegar	Deficient of 35% of acetic acid	Fined 10/-
745	Milk	" 15% of fat	} Fined £5 & 16/6 costs
746	Milk	" 21% " "	
837	Milk	" 4% of non-fatty solids	} Fined £5 & 10/6 costs
840	Milk	" 7% " "	
1,097	Milk	" 5% " "	} Fined £3 & £16 7s. 0d. costs
1,098	Milk	" 6% " "	
1,100	Milk	" 5% " "	
1,277	Milk	" 5% of fat	Fined £10 & £3 2s. 0d. costs
1,323	Milk	" 5% of non-fatty solids	Fined £5 & 9/- costs
1,444	Rum	Being 37.3° under proof	Fined £2 0s. 0d.
1,442	Gin	" 36.4° " "	Fined £2 0s. 0d.
1,324	Vinegar	Deficient of 40% of acetic acid	Fined £2 0s. 0d.
1,325	Vinegar	" 36% " "	Fined £2 0s. 0d.
1,326	Vinegar	" 17% " "	Fined £1 0s. 0d.

Appropriate action was taken by the Medical Officer of Health and the Chief Sanitary Inspector in respect of other samples returned as adulterated but in which no legal proceedings were taken.

Report of the Departmental Committee on the Composition and Description of Food.—The report of this Departmental Committee, which was appointed by the Minister of Health and the Secretary of State for Scotland, was published in April, 1934.

The Committee found that " it is desirable that the law relating to the composition and description of articles of food should be altered so as to enable definitions or standards to be prescribed, or declarations to be required, for articles of food other than liquid milk."

Although the Committee do not recommend the extension of standards or definitions to *all* articles of food, they were satisfied that in some cases standards or declarations of composition or definitions are necessary for the protection of the public, so that they may know what they are getting, and especially so in the case of foods offered specifically for infants and invalids. Careful consideration was given to the misleading nature of some food advertisements and labels, the protection of the retailer of pre-packed goods, the prevention of imported foods which contravene any requirements laid down and the consolidation of the statutes dealing with the composition of food, and recommendations were made with regard to them. The adoption of these recommendations would constitute an enormous advance upon the present Act, which in many ways is unsatisfactory from the point of view of both the purchaser and the Authorities charged with its administration, and it is to be hoped that in the near future legislation will be introduced to give effect to the findings of the Committee.

Fertilisers and Feeding Stuffs Act, 1926.—Sixteen samples, consisting of 3 fertilisers and 13 feeding stuffs were submitted for examination. Particulars of these articles are as follows:—

Article	Number Examined	Number Unsatisfactory		Observations
		In Composition	In Declaration	
Barley Meal	1	Statutory statement not supplied
Bran	1	....	....
Brewers' Grains, Dried	1	....	1
Compound Cake	1	....	....
Compound Fertiliser	1	....	....
Fish Meal, White	1	Oil :—Guaranteed 4·0% Found 2·5%
Indian Meal	1	....	....
Maize, Flaked	2	1	....
Oats, Sussex Ground	2	....	....
Sharps	1	....	1
Sulphate of Ammonia	2	Statutory statement not supplied
Weatings	2	....	....
Totals	16	1	2	

Rag Flock Acts, 1911 and 1928.—Seven samples of rag flock obtained from upholsterers conformed to the standard of cleanliness laid down by the Rag Flock Regulations. The maximum amount of water-soluble chlorine permitted is 30 parts per 100,000 of flock, while the quantities present in these samples varied from 5·5 to 28 parts per 100,000. Another sample was found to contain 150 parts of water-soluble chlorine per 100,000, but it transpired that this article was not rag flock as defined by the Rag Flock Act (1911) Amendment Act, 1928.

Imported Food.—In addition to the samples of food and drugs analysed for the Urban Sanitary Authority, 51 samples of imported food were examined for the Port Sanitary Authority. They consisted of the following articles:—

Barley, Pearl 4	Orange Juice 1	Salt 1
Ginger 1	Pears 1	Sardines, Canned 7
Glucose 1	Raisins 31	Sardine Paste 1
Groats 1	Sago 1	Sultanas 1

One of the samples of pearl barley contained 350 parts of sulphur dioxide per million. It was ascertained that this consignment was intended for use as ships' stores and it was therefore exempt from the provisions of the Preservatives in Food Regulations, which prohibit the presence of sulphur dioxide in this article.

The orange juice contained 580 parts of sulphur dioxide per million. Fruit juices must not contain more than 350 parts of this preservative per million unless "it is intended to be so treated before it is sold or exposed for sale by retail as to comply with the provisions of the Schedule as regards the proportion of sulphur dioxide contained." Upon enquiry, it was found that this fruit juice was to be diluted before use in the preparation of fruit drinks.

In 1933, 10 out of 22 samples of raisins contained excessive quantities of sulphur dioxide and six large consignments were re-exported under instructions by the Medical Officer of Health. This action seems to have been effective, for of the 31 samples examined during 1934, 13 were free from sulphur dioxide and the rest contained amounts varying from 50 to 285 parts per million, the maximum allowed by the Regulations being 750 parts per million.

Miscellaneous Samples.—Fifty-six samples of a miscellaneous character were examined for various departments of the Corporation.

Of 21 samples of mortar submitted by the City Engineer, eight were unsatisfactory in composition, being very deficient in lime.

A sample of slime removed from the sides of the drum of a centrifuge for "cleansing" milk had the following composition:—

	Percentage.
Water	66·8
Fat	4·7
Protein	22·3
Lactose	0·0
Other organic matter	1·9
Mineral matter*	4·3
	<hr/>
	100·0
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* Containing sand and siliceous matter = 0·84 per cent.

At the time this sample was taken, approximately 400 gallons of milk had passed through the machine and the total amount of slime weighed 350 grams, which is equivalent to approximately 0·02 part of slime per 100 parts of milk centrifuged.

In addition, seven samples were analysed for the Coroner for East Glamorgan in connection with the death of a man at Llandough Hospital, and 21 samples of washed flock and one of unwashed flock were examined for the South Wales Flock Company.

Summary of Samples.—The total number of samples examined during the year was as follows:—

Food and Drugs for Urban Sanitary Authority	1,450
Imported food for Port Sanitary Authority	51
Under the Fertilisers and Feeding Stuffs Act	16
Under the Rag Flock Acts	8
For the Public Health Department	13
For the Public Assistance Committee	8
For the Public Works Committee	21
For the City Treasurer and Controller's Department	6
For the City Police	1
For the City Coroner	7
For the Coroner for East Glamorgan	7
For the South Wales Flock Company	22
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Total	1,610
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XVII.—HOUSING.

The following is a statement in the form required by the Ministry of Health in relation to housing :—

1. *Inspection of Dwelling-houses during the Year :—*

(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	8,193
(b) Number of inspections made for the purpose	19,499
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	829
(b) Number of inspections made for the purpose	1,774
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	—
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	2,452

2. *Remedy of Defects during the Year without Service of formal Notices :—*

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	2,359
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3. *Action under Statutory Powers during the Year :—*

(a).—Proceedings under Sections 17, 18 and 23 of the Housing Act, 1930 :

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	35
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(a) By owners	35
(b) By Local Authority in default of owners	—

(b).—Proceedings under Public Health Acts :—

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	292
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(a) By owners	302
(b) By Local Authority in default of owners	—

(c).—Proceedings under Sections 19 and 21 of the Housing Act, 1930 :

(1) Number of dwelling-houses in respect of which Demolition Orders were made	1
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders	1

(d).—Proceedings under Section 20 of the Housing Act, 1930 :

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made	—
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	—

House Inspection.—The results of all recorded house inspections during the year have been summarised in the following statement :—

Structurally separate dwellings inspected and recorded	829
Number overcrowded as measured by :—	
Air-space standard*	6
Undesirable intermingling of sexes†	5
Registrar-General's standard‡	40
Number with :—	
One family	549
Two families	251
Three families	18
More than three families	11
Without through ventilation	1
Without satisfactory washing accommodation	116
Without satisfactory cooking arrangements	20
Without proper food pantries	683
Without troughs	222
Dampness from :—	
Defective roofs, shutters or downpipes	201
Defective outside plastering or joints	105
Lack of, or defective, damp-proof courses	20
With earth or pail closets	1
Drained to cesspools	—
Without flushing cisterns	503
With flushing cisterns out of repair	20
Without covered galvanised iron ash-bins	795

Multiple Tenancy.—For comparison with the records of inquiries made in previous years, the following summary is given of the living conditions of families coming under the observation of the department in relation to multiple tenancy :—

<i>Source of Information.</i>	<i>Number of Houses.</i>	<i>Percentage occupied by more than One Family.</i>
Birth records	3,058	63·3
Tuberculosis records	431	39·0
Housing records	829	33·8

These records of multiple tenancy have been kept regularly since 1928, and notwithstanding the provision of new houses by the City Council and by private enterprise, there has been no reduction in the proportion of houses occupied by more than one family.

Housing Act, 1930.—Seventeen Clearance Orders were made by the City Council during the year. The areas contained 151 houses and 7 other buildings, housing 163 families consisting of 623 persons. Particulars of the areas and other evidence in preparation for the Local Inquiry had to be obtained and this took up a considerable amount of time. Objections on behalf of the owners were lodged in respect of each area. Further particulars will be given in the report for 1935.

In addition to the clearance areas, 53 individual unfit houses were represented, and the procedure in respect of these was only in its initial stages at the end of the year.

* At least 300 c. ft. per adult and 150 c. ft. per child under 10 years of age in bedrooms.

† Where two or more persons of the opposite sex, each over 13 years of age, excluding married couples, occupy the same room for sleeping purposes.

‡ More than two persons per room. Both living and sleeping rooms are included in the total number of rooms, and all children are counted as adults.

The number of houses repaired under Section 17 of the Act was 666, and, of these, 631 were dealt with by informal notices and 35 by formal notices.

Council Housing Estates.—The following table contains particulars of the work carried out by the department in connection with the Council housing estates each year since 1930 :—

Year	Vacant Houses inspected	Vacant Houses found to be verminous	Percentage found verminous	Houses reported verminous by City Treasurer and Controller's Dept.	Investigations into home conditions of applicants	Miscellaneous inspections
1930	321	98	30·5	95	344	53
1931	347	93	26·8	40	312	42
1932	419	91	21·7	41	411	65
1933	435	89	20·5	75	367	196
1934	452	110	24·3	81	681	129

In view of the increase in the work undertaken by the department in connection with the Council housing estates, the City Council decided to appoint an additional sanitary inspector especially for this work. His duties consist of the periodical inspection of Council houses, the inspection of vacant houses and the supervision of the disinfection of verminous houses. He also reports on applications for transfer to other houses on the estates and on the suitability of applicants before rehousing.

Houses-let-in-lodgings.—Mainly owing to stress of work involved in the slum clearance scheme, it has not been possible to continue the activities of the department in connection with houses-let-in-lodgings which were referred to in the report for 1932. Further, it is anticipated that, when sufficient houses have been built to deal with all overcrowded families, many houses now in this category will cease to be occupied by more than one family.

XVIII.—GENERAL SANITATION.

Statements as to the nature and extent of the work done during 1934 in connection with general sanitary inspection are given below. A summary of legal proceedings and particulars with regard to disinfection, baths at Cleansing Station and bodies taken to the Public Mortuary are also included.

GENERAL SANITARY INSPECTION.

Complaints of nuisances received 1,804

	Inspections or Visits	Intimation Notices		Statutory Notices	
		Served	Complied with	Served	Complied with
House inspections for nuisances	3,149	2,257	2,214	292	302
" " in connection with in- fectious diseases	2,961				
" " for vermin	1,056	194	144		
" " for other conditions	1,027	1	1		
Houses inspected and recorded	829				
Re-inspections of houses	11,024				
Owners and contractors interviewed	1,640				
Knackers' yards	47	1			
Slaughter-houses	524		2		
Milkshops, etc.	1,815	11	8		
Cowsheds	343	4	3		
Offensive trades	135	5	5		
Workshops—					
Bakehouses	295	28	21		
Bootmakers	116	9	9		
Dressmakers and milliners	35	4	3		
Laundries	17		1		
Tailors	89	9	8		
Miscellaneous	341	20	13		
Factories—					
Bakehouses	124	21	12		
Bootmakers	37	1	1		
Laundries	35	1			
Tailors	9	1	1		
Dressmakers and milliners	2				
Miscellaneous	518	25	19		
Workplaces	239	16	14		
Tailors' outworkers	9	2	3		
Seamen's lodging houses (day)	1,101	148	120		
" " " (night)	142				
Common lodging houses (day)	65	6	7		
" " " (night)	2				
Houses-let-in-lodgings	37	1	1		
Tents, vans, sheds and similar structures	164	10	9		
Amusement places	143	4	2		
Public houses	57	4	4		
Schools	193	4	4		
Swimming baths	70				
Water supplies	6				
Water courses	69	1	2		
Refuse tips	9				
Accumulations	346	7	8		
Sewers	50	6	5		
Drains	3,200	85	70		
Public urinals	112				
Cesspools	14				
Back lanes	229	2	2		
Rat infestation	836	34	33		
Premises where swine or other animals are kept	172	10	8		
Marine store hawkers	17	1			
Visits not classified	4,158				

NUISANCES ABATED, REPAIRS EXECUTED, ETC.

Houses :—

Walls repaired	337
Outside plastering repaired	458
Inside plastering repaired	591
Damp-proof courses inserted	11
Floors renewed or repaired	438
Floors ventilated	68
Roofs renewed or repaired	585
Shutes, downpipes or gutters renewed or repaired	535
Chimneys repaired	209
Ceilings repaired	228
Doors and frames repaired	252
Lighting and ventilation of rooms improved	22
Window sashes or frames renewed or repaired	489
Window cords renewed	456
Staircases repaired	41
Grates or ovens repaired or renewed	247
Boilers provided or repaired	87
Food stores provided or improved	7
Washhouses provided or improved	38
Out-buildings repaired	13
Obstructive out-buildings demolished	3
Walls or ceilings cleansed or redecorated	286
Bedding cleansed or destroyed	67
Rooms treated for vermin	868
Overcrowding abated	10
Yard paving relaid or repaired	454
Nuisances from animals abated	4
Accumulations removed	30
Ash-bins provided	2
Water supply provided	3
Water taps or pipes repaired	15
Water samples taken for analysis	7
Miscellaneous repairs and nuisances abated	302

Drainage :—

Drains tested (smoke)	321
„ „ (chemical)	814
New drains constructed	38
Drains reconstructed	102
Drains repaired	590
Drains under houses abolished	4
Drains cleansed	298
Drains cleansed or repaired by Corporation in default of owners	7
Inspection or intercepting chambers provided or repaired	97
Intercepting traps fixed	5
Soilpipes or ventilating shafts fixed or repaired	45
Rain-water pipes disconnected	3
Gullies fixed	118
Drain inlet inside houses abolished	5

NUISANCES ABATED, REPAIRS EXECUTED, ETC.—(contd.)

Troughs provided	96
Troughs trapped or waste pipes repaired	111
Bath waste pipes trapped or repaired	14
Lavatory basins trapped or waste pipes repaired	10
Additional w.c.'s provided	30
W.c.'s reconstructed	139
Lighting and ventilation of w.c.'s improved	17
New pans and traps fixed	1,867
W.c. pans cleansed	23
Flushing apparatus provided	1,094
Flushing apparatus repaired	40
Miscellaneous repairs	156

Cesspools :—

Abolished and house connected to sewer	3
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Seamen's Lodging Houses :—

Limewashing or cleansing carried out	172
Bedding renewed	49
Verminous rooms treated	97
Bedsteads cleansed or repaired	192
Accumulations removed	6
Washing accommodation provided	5
Other repairs	6
W.c.'s repaired	4

Common Lodging Houses :—

Limewashing or cleansing carried out	7
Bedsteads cleansed or repaired	1
Verminous rooms treated	2

Urinals :—

Additional urinals provided	1
Walls repaired or made impervious	1

Earth or Pail Closets :—

Abolished	10
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Tents, Vans or Sheds :—

Removed	19
Sanitary improvements effected	3

Amusement Places :—

Atmospheric observations	11
W.c.'s repaired	1

NUISANCES ABATED, REPAIRS EXECUTED, ETC.—(contd.)

Dairies, Cowsheds and Milkshops :—

New dairies constructed	....	....	....	3
Existing dairies improved	....	....	....	3
Existing cowsheds improved	....	....	....	2
Drainage improved	....	....	....	4
Paving repaired	....	....	....	8
Lighting or ventilation improved	....	....	....	4
Limewashing or cleansing carried out	....	....	....	54
Water supply provided	....	....	....	1
Sterilisers fixed	....	....	....	5
Ash-bins provided	....	....	....	1
Accumulations of manure removed	....	....	....	3
Other repairs	....	....	....	18

Ice Cream Premises :—

Limewashing or cleansing carried out	....	....	....	30
Ash-bins provided	....	....	....	9
Accumulations removed	....	....	....	1
Premises improved	....	....	....	16
Other repairs	....	....	....	8
Use of unsuitable premises discontinued	....	....	....	2

Food Shops, Kitchens, etc. :—

Communicating w.c. abolished	....	....	....	2
Accumulations removed	....	....	....	3
Cleanliness improved	....	....	....	15
Ash-bins provided	....	....	....	6
Other repairs	....	....	....	4
Washing-up sinks fixed	....	....	....	2
Lighting or ventilation improved	....	....	....	1

Food Vehicles :—

Warnings regarding general cleanliness of vehicle, person or covering	13
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Fried Fish Shops :—

New ranges fitted	9
Ash-bins provided	9
Cleansing carried out	29
Storage accommodation provided or improved	....	....	....	5
Drainage improved	....	....	....	4
Accumulations removed	....	....	....	5
Other repairs	....	....	....	5
Unsuitable premises discontinued	....	....	....	4

Houses-let-in-lodgings :—

Limewashing or cleansing carried out	2
--------------------------------------	------	------	------	---

Offensive Trades :—

Accumulations removed	....	....	....	7
Cleanliness improved	....	....	....	6
Floors or walls repaired	....	....	....	3
Impervious receptacles provided	....	....	....	2
Lighting or ventilation improved	....	....	....	1

NUISANCES ABATED, REPAIRS EXECUTED, ETC.—(contd.)

Knackers' Yards :—

Accumulations removed	....	....	....	2
Cleanliness improved	....	....	....	7
Other repairs	....	....	....	1
Floors and walls repaired	....	....	....	1
Drainage improved	....	....	....	1

Stables :—

Accumulations of manure removed	....	....	....	23
Paving repaired or renewed	....	....	....	6
Manure receptacles provided or repaired	....	....	....	4
Limewashing carried out	....	....	....	6
Drains provided	....	....	....	2

Back Lanes :—

Accumulations removed	5
Surfaces repaired	3

Miscellaneous repairs or nuisances abated	3
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Choked and Defective Drains.—During the year action was taken under Section 98 of the Cardiff Corporation Act, 1930, in 7 cases in which the owners or occupiers failed to carry out the work, and no difficulty was experienced in recovering the costs incurred.

Flushing Cisterns.—During the year, 1,904 flushing cisterns were installed to hand-flushed closets, making a total of 8,623 since the work was commenced in February, 1931.

Conservancy System Closets.—The numbers of closets remaining on the conservancy system at the end of the year were as follows :—

Earth closets	....	....	....	....	....	6
Privies	....	....	....	....	....	84
Total						90

As a result of action taken under Section 100 of the Cardiff Corporation Act, 1930, the number of privies and earth closets was reduced by 10 during 1934.

Cesspools.—There are 51 cesspools in the city receiving drainage from dwelling-houses and 3 cesspools in connection with factories.

Swimming Baths, etc.—Last year Roath Park Lake was stocked with trout in the hope that the fish would destroy the cercariae which cause the rash on bathers, and it is significant to record that, although the water was not treated with copper sulphate, no complaint of rash occurred. This may be due to the effectiveness of the treatment of the water in past years in reducing the number of water snails which are the hosts of the cercariae, or, on the other hand, it may be due to some unknown cause. In the absence of evidence to the contrary, the introduction of the trout may be accepted as having been effective.

For many years the need of a continuous filtration plant for the open-air swimming bath at Llandaff Fields has been stressed. This was provided toward the end of the summer, and the water is now maintained in a much better condition than hitherto. Further, there is now no need for the frequent rough-and-ready dosings with chlorine and copper sulphate to keep the water reasonably pure. The only bath now without a proper filtration plant is that at Splott Park, but this is the smallest bath in the city ; it is supplied with water from the city mains and is emptied frequently.

Rat Destruction.—The following is a summary of the work of the department in connection with the destruction of rats :—

Amount of poisons sold	....	....	tins	94
Number of baits laid in public sewers	....	....	....	4,078
Number of baits eaten	....	....	....	3,304
Number of baits laid elsewhere	....	....	....	30,494
Number of baits eaten	....	....	....	24,281
Total number of baits laid	....	....	....	34,572
Total number of baits eaten	....	....	....	27,585

During the year, 1,175 live rats and 813 dead rats from premises in the city were submitted to the Department of Zoology, National Museum of Wales, for identification and for examination of their parasitic fleas, for comparison with those submitted from ships and the docks.

Factories, Workshops and Workplaces.—Details of the sanitary inspection of factories, workshops and workplaces under the Factory and Workshop Act, 1901, are given in the following tables :—

I.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

PREMISES	Number of		
	Inspections	Written Notices	Prosecutions
Factories (including Factory Laundries)	725	49	
Workshops (including Workshop Laundries)	893	70	
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	239	16	
Totals	1,857	135	

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

PARTICULARS	Number of Defects	
	Found	Remedied
Nuisances under the Public Health Acts :—		
Want of Cleanliness	109	95
Want of Ventilation	2	1
Overcrowding		
Other Nuisances	11	17
Sanitary accommodation	1	
{ insufficient	17	21
{ unsuitable or defective	2	2
{ not separate for sexes		
Breach of special sanitary requirements for bakehouses (Sec. 97 to 100)		
Totals	142	136

3.—HOME WORK.

NATURE OF WORK	OUTWORKERS' LISTS, SECTION 107						OUTWORK IN UNWHOLESOME PREMISES, SECTION 108		OUTWORK IN INFECTED PREMISES, Sections 109, 110		
	Lists received from Employers					Notices served on Occupiers as to keeping or sending lists	In- stances	Notices served	In- stances	Orders made (S.110)	
	Sending twice in the year			Sending once in the year							
	Lists	Outworkers		Lists	Outworkers						
		Con- tractors	Work- men		Con- tractors	Work- men					
Wearing Apparel—											
(1) Making, etc.	25	116	1	3	47	2	2
(2) Cleaning and washing

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the Year	Number
Bakers	95
Bootmakers	120
Dressmakers and milliners.....	65
Laundries	16
Tailors	132
Miscellaneous	318
Total Number of Workshops on Register	746

5.—OTHER MATTERS.

Class	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (Sec. 133) .....	....
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts but not under the Factory Act :—	
Notified by H.M. Inspector	11
Reports (of action taken) sent to H.M. Inspector	14
Other (Notices of Occupation of Workshops received from H.M. Inspector)	14
Underground Bakehouses in use at the end of the year .....	....

Shops.—The following is a summary of the work done under the Shops Acts and in connection with the sanitary inspection of shops :—

Closing Orders in operation	15
Observations of shops under Closing Orders	1,666
Observations of shops as to weekly half-holidays	3,096
Inspections of shops	631
Infringements of Shops Acts.....	71
Notices requiring sanitary defects to be remedied :—	
Served	28
Complied with	16

At the end of the year the Shops Act, 1934, became operative. Briefly, this Act deals with the sanitary condition of shops and lays down hours of employment for persons under the age of 18 years. The work entailed will add considerably to the duties of the sanitary inspectors, each of whom is responsible for the enforcement of the Shops Acts in his district.

Legal Proceedings.—The following is a summary of legal proceedings taken during the year in connection with general sanitary administration :—

Acts, etc., under which proceedings were taken	Number	Fined	Cautioned	To pay cost only	Dismissed	With-drawn	Amount of Fines and Costs
Shops Acts	71	44	12	13	....	2	£ 14 s. 14 d. 14 14 6
Public Health Act, 1875 (Sec. 94)	3	...	...	3	....	....	8 0
Housing Act, 1930	9	...	...	9	....	...	1 2 6
Cardiff Corporation Act, 1930 (Sec. 101)	9	....	...	9	....	....	1 6 0
Cardiff Corporation Act, 1930 (Sec. 93)	1	1	...	...	....	....	2 0 0
Merchant Shipping Act, 1894 (Sec. 214, Sub-sec. 5)	18	10	8	...	....	...	8 0 0
Totals	111	55	20	34	....	2	£27 11 0

Disinfection.—Disinfection was carried out at 383 houses during the year, and 8,730 articles of bedding, clothing, etc., were removed to and disinfected at the Disinfection Station ; 222 infected articles were destroyed by arrangement with or at the request of the owners.

Cleansing Station.—The total number of baths for scabies, pediculosis, etc., undertaken at the Cleansing Station was 364.

Public Mortuary.—Seventy-five bodies (62 males, 13 females) were taken to the Public Mortuary and 38 post-mortem examinations were performed there.

XIX.—CARDIFF CORPORATION ACT, 1934.

The following is an epitome of the sections of the Cardiff Corporation Act, 1934, in which the Public Health Department is especially interested :—

Section 46.—Power to make and enforce byelaws for preventing meat brought into Cardiff and intended for food from being offered for sale or sold or deposited for sale or for preparation for sale until after inspection.

Section 47.—This section repealed sections 112 and 113 of the Cardiff Corporation Act, 1930. It requires premises used for the manufacture, etc., of potted meats and ice-cream manufacturers and premises not only to be registered, but extends the sections repealed by giving the Corporation power to refuse or revoke applications from unsuitable persons or in respect of insanitary premises.

Section 48.—Power to enable samples of food to be taken in places where food is prepared for sale or is sold or is kept with a view to future sale and to enable food suspected of causing food poisoning to be detained for a sufficient period to have it examined for the presence of food poisoning organisms.

XX.—ATMOSPHERIC POLLUTION.

The amount of atmospheric pollution in Cardiff is comparatively small. During the year, 117 observations of chimneys for smoke and/or grit were made by sanitary inspectors, but it was found necessary to issue a notice to abate a smoke nuisance, which was complied with, in only one instance.

Atmospheric pollution observations made with a deposit gauge in Cardiff during 1934 are given in the following table :—

Month	Rain-fall (mm)	Grammes per Square Dekameter (Metric Tons per Hundred Square Kilometers)								
		Insoluble Matter			Soluble Matter		Total Solids	Included in Soluble Matter		
		Tar	Carbon- aceous other than Tar	Ash	Loss on Ignition	Ash		Sulphates (SO ₃)	Chlorine (Cl)	Ammonia (NH ₃)
January	72	5	106	160	136	266	673	69	80	0·5
February	16	4	71	134	41	68	318	29	8	1·0
March	49	4	110	144	109	173	540	52	46	3·0
April	66	4	94	144	74	105	421	39	19	4·0
May	38	4	77	124	59	126	390	48	24	1·0
June	42	4	69	118	36	67	294	24	12	1·0
July	32	4	64	93	39	53	253	20	9	3·0
August	81	4	71	106	51	154	386	41	44	1·0
September	85	5	89	142	69	130	435	47	26	1·0
October	70	4	64	93	69	196	426	53	61	1·0
November	48	5	112	130	68	116	431	44	28	1·0
December	261	5	113	156	93	371	738	148	74	4·0
Total	860	52	1,040	1,544	844	1,825	5,305	614	431	21·5
Mean	72	4	87	129	70	152	442	51	36	1·8

The amount of atmospheric sulphur dioxide, as measured by the "lead peroxide" method, in Cardiff during 1934 was as follows :—

Month.	Milligrams SO ₂ per 100 sq. cm. per day
January	1·817
February	2·037
March	1·253
April	0·962
May	0·742
June	0·517
July	0·490
August	0·581
September	0·727
October	1·106
November	1·717
December	1·371

The mean daily units of ultra-violet radiation, as measured by the acetone methylene blue method, in Cardiff during 1934 were as follows :—

Month	Mean Daily Radiation Units	
	Penylan (Suburban)	City Hall (Central)
January	0.26	0.27
February	0.36	0.36
March	0.40	0.39
April	0.80	0.65
May	1.16	1.11
June	2.43	2.37
July	2.81	2.69
August	1.60	1.58
September	1.10	1.07
October	0.50	0.50
November	0.30	0.30
December	0.20	0.20

XXI.—METEOROLOGICAL OBSERVATIONS.

The Climatological Station, which is under the control of the Medical Officer of Health, is situated at Penylan, Cardiff. The geographical position of the Station is Latitude 51° 30'N., Longitude 3° 10'W., and the height of the Station above mean sea level is 203 feet. Observations are made daily at 9.0 a.m. and 9.0 p.m. (G.M.T.) Summaries of the observations made during 1934 are given in the following tables :—

BAROMETRIC PRESSURE AND RELATIVE HUMIDITY.

Month	Attached Thermo- meter (Mean)	Mean Barometric Pressure*		Hygrometer*		
		Uncorrected	Reduced to Mean Sea Level and Temp. 32° F.	Dry Bulb (Mean)	Wet Bulb (Mean)	Mean Relative Humidity
	°F.	Inches.	Inches.	°F.	°F.	%
January	48	29.912	30.120	40.3	39.2	92
February	47	30.268	30.481	37.8	35.4	80
March	49	29.519	29.834	41.4	39.5	86
April	53	29.577	29.768	45.9	43.2	84
May	64	29.962	30.122	52.6	47.4	67
June	69	29.933	30.073	59.5	55.3	73
July	72	29.910	30.040	65.2	60.0	71
August	67	29.778	29.926	58.3	55.4	83
September	65	29.835	29.953	58.0	55.4	83
October	58	29.823	29.993	51.2	49.3	88
November	53	29.852	30.197	44.2	42.9	90
December	53	29.519	29.707	47.3	46.4	94
	58	29.824	30.018	50.1	47.5	82

* From observations at 9 a.m. and 9 p.m. (G.M.T.)

TEMPERATURE.

Month	Absolute Maximum	Absolute Minimum	Mean of Maximum	Mean of Minimum	Mean Temperature	Difference from Average (45 years)
	°F.	°F.	°F.	°F.	°F.	°F.
January	52	31	45·5	37·3	41·4	+ 1·0
February	53	27	45·7	33·7	39·7	— 0·5
March	53	27	43·8	36·9	42·9	+ 0·4
April	66	32	52·3	41·0	46·9	+ 0·5
May	77	36	60·4	45·8	53·1	+ 0·4
June	78	46	68·2	53·0	60·6	+ 3·3
July	84	50	74·2	57·0	65·6	+ 5·0
August	73	44	66·2	54·4	60·3	0·0
September	76	44	65·0	52·7	58·9	+ 2·5
October	63	32	56·5	46·4	51·5	+ 1·2
November	54	30	48·3	40·8	44·5	+ 0·3
December	54	37	50·7	44·1	47·4	+ 6·4
	84	27	56·8	45·3	51·1	+ 1·8

TERRESTRIAL RADIATION, UNDERGROUND TEMPERATURE, SOLAR RADIATION
AND SUNSHINE.

Month	Temperature				Bright Sunshine	
	Grass Minimum (Mean)	Underground (Mean)		Solar Maximum (Mean)	Total Duration	Difference from Average (26 years)
		1 ft.	4 ft.			
	°F.	°F.	°F.	°F.	Hours	Hours
January	30·4	39·9	42·9	67·9	57·3	+ 3·9
February	26·7	38·2	42·0	78·2	110·0	+ 34·7
March	28·9	41·1	42·6	95·4	121·4	+ 1·6
April	33·6	46·5	45·5	103·5	137·3	— 31·1
May	36·7	54·8	50·8	114·5	259·5	+ 38·6
June	40·1	61·6	56·0	125·0	245·7	+ 23·8
July	44·3	65·8	60·2	129·1	280·8	+ 73·8
August	39·2	62·0	60·4	119·2	187·3	+ 1·6
September	43·8	59·2	58·9	114·2	159·4	+ 12·2
October	42·4	54·2	56·1	93·4	82·2	— 25·2
November	37·9	46·3	50·9	67·3	32·2	— 36·0
December	40·9	47·3	49·6	68·3	34·5	— 14·9
	37·1	51·4	51·3	98·0	1,687·6*	+ 83·0

* = 38 % of possible duration and a daily average of 4·62 hours.

RAINFALL.

Month	Total	Difference from Average (43 years)	Greatest Fall in 24 hours*		Number of Rain-days (0·01 inch or more)	Duration
			Amount	Day		
	Inches	Inches	Inches			Hours
January	3·57	— ·44	1·13	11th	20	90·50
February	0·62	— 2·37	·62	24th	1	10·50
March	1·92	— 1·11	·46	16th	18	68·00
April	2·70	+ ·08	·44	18th	17	59·50
May	1·45	— 1·22	·53	6th	8	28·50
June	1·55	— 1·02	·54	23rd	7	20·75
July	1·54	— 1·40	·77	21st	9	14·00
August	3·87	— ·26	·91	5th	16	56·50
September	3·45	+ ·37	·85	2nd	19	46·50
October	2·96	— 1·93	·68	6th	19	70·00
November	1·57	— 2·21	·62	9th	11	41·50
December	11·17	+ 6·63	1·60	5th	30	179·00
	36·37	— 4·88	1·60	5th Dec.	175	683·25

* 24 hours ended 9 a.m. (G.M.T.) next day.

PORT SANITARY SERVICE.

I.—SHIPPING ENTERING THE PORT.

The following table (compiled from information kindly supplied by H.M. Collector of Customs) shows the annual number of arrivals and tonnage of vessels since 1925 :—

Year	NUMBER OF ARRIVALS			TONNAGE		
	From Foreign	Coastwise*	Totals	From Foreign	Coastwise*	Totals
1925	3,405	4,686	8,091	3,399,249	1,920,546	5,319,795
1926	2,204	3,517	5,721	2,208,168	1,218,551	3,426,719
1927	3,451	5,847	9,298	3,593,633	3,013,405	6,607,038
1928	3,205	4,530	7,735	3,389,525	1,695,890	5,085,415
1929	3,531	4,601	8,132	3,652,185	1,891,215	5,543,400
1930	3,210	4,368	7,578	3,182,124	1,820,183	5,002,307
1931	2,433	4,271	6,704	2,467,542	1,689,505	4,157,047
1932	2,089	4,401	6,490	2,337,218	1,702,412	4,039,630
1933	1,903	4,388	6,291	2,017,207	1,778,635	3,795,842
1934	1,791	4,567	6,358	1,891,385	1,858,569	3,749,954

The number and tonnage of vessels entering the port (which includes Penarth) inspected by officers of the Port Sanitary Authority during 1934 are set out below :—

Ministry of Health Table A.

		Number	Tonnage	Number Inspected by		Number reported defective	Number of Vessels on which defects were remedied	Number of Vessels reported as having or having had during the voyage infectious disease on board
				Medical Officer	Sanitary Inspector			
From Foreign	Steamers	1,478	1,808,205	55	1,004	290	286	15
	Motor	133	55,937	10	79	4	4	1
	Sailing	161	16,356	5	104	17	17	....
	Fishing	19	10,887	....	6	1	1	....
Total Foreign		1,791	1,891,385	70	1,193	312	308	16
Coastwise	Steamers	1,853	1,567,153	7	1,077	198	195	8
	Motor	205	71,244	....	103	4	4	1
	Sailing	173	20,029	....	38	....	....	....
	Fishing	392	44,303	1	147	....	....	1
Total Coastwise ...		2,623	1,702,729	8	1,365	202	199	10
Total Foreign and C'stwise		4,414	3,594,114	78	2,558	514	507	26

* Including tugboats, sand barges, pleasure steamers, etc.

The following table shows the number of vessels entering the port which were dealt with by the department each month during 1934 :—

Month	From Foreign	Coastwise	Totals
January	150	230	380
February....	166	228	394
March	169	236	405
April	126	241	367
May	136	219	355
June	159	220	379
July	152	238	390
August	130	187	317
September	174	220	394
October	136	215	351
November	154	208	362
December	139	181	320
Totals	1,791	2,623	4,414

The nationalities of the several types of vessels entering the port which were dealt with by the department during 1934 are shown in the following table :—

Nationality	Steam	Motor	Sailing	Totals
American	1	...	...	1
Belgian	22	1	...	23
Brazilian	1	...	...	1
British	2,667	179	167	3,013
Danish	76	...	1	77
Dantzian	4	...	...	4
Dutch	16	39	...	55
Egyptian	1	...	...	1
Esthonian	46	...	...	46
Finnish	48	...	1	49
French	151	68	162	381
German	38	...	...	38
Greek	73	...	...	73
Irish Free State	97	30	3	130
Italian	31	1	...	32
Japanese	5	...	...	5
Latvian	36	...	...	36
Norwegian	151	7	...	158
Panamanian	7	...	...	7
Portuguese	26	...	...	26
Roumanian	1	...	...	1
Russian	1	...	...	1
Spanish	104	...	...	104
Swedish	112	13	...	125
Yugo-Slavonian	27	...	...	27
Totals	3,742	338	334	4,414

II.—CHARACTER OF TRADE.

Passenger Traffic.—The passenger traffic at the port is casual and small in volume and cannot be classified in the form prescribed by the Ministry of Health (*Table B*). The numbers of inward and outward passengers were 239 and 93 respectively, all of whom travelled by cargo vessels.

Cargo Traffic.—The principal imports are iron ore, pitwood, fruit, potatoes, onions, grain, flour, sugar and other provisions. The principal exports are coal, coke, patent fuel and flour. Amongst the countries and places with which the port principally trades may be mentioned Spain, France, Portugal, Italy, Norway, the Baltic Ports, United States of America, Argentina, Brazil, Canada and North Africa.

The following figures as to imports and exports annually since 1925 have kindly been supplied by the Chief Docks Manager :—

Year	Imports (tons)	Exports (tons)
1925	1,940,836	9,798,810
1926	2,003,654	4,358,411
1927	2,073,680	10,188,499
1928	1,730,940	8,970,143
1929	1,981,165	10,144,026
1930	1,711,970	8,963,328
1931	1,451,436	7,543,488
1932	1,185,010	6,944,230
1933	1,179,451	6,482,230
1934	1,250,725	6,584,936

III.—WATER SUPPLY.

The water supply for the port and shipping is derived entirely from the Cardiff Corporation supply by means of hydrants installed at convenient points.

Section 75 of the Cardiff Corporation Act, 1894, provides that "where the Medical Officer of Health of the Cardiff Port Sanitary Authority is satisfied that the water in any tank, cistern, cask or other fixed receptacle in any ship, vessel or boat within the district of that authority, used or likely to be used by man for drinking or domestic purposes, is so polluted as to be injurious to health, the Medical Officer of Health of such authority may cause to be emptied and cleansed any such tank, cistern, cask or other fixed receptacle."

This simplifies the procedure under the Public Health Act, 1875, whereby a magistrate's order must first be obtained.

During the year, 126 samples of drinking water from ships were submitted to the Cardiff and County Public Health Laboratory for bacteriological examination, the results being as follows :—

Satisfactory	....	....	105
Moderate purity	....	....	8
Doubtful purity....	....	....	7
Contaminated	....	....	6
Total			126

Notices were served on the masters of the vessels having contaminated water or water of doubtful purity on board, and in each instance the tanks were emptied, cleansed and refilled at this port.

IV.—PORT SANITARY REGULATIONS, 1933.

The arrangements made for the operation of the Port Sanitary Regulations, 1933, at the port were fully described in the annual report for 1933.

Wireless Installations.—The results of the usual inquiries made during the year regarding the number of vessels carrying wireless installations (excluding vessels under 500 net registered tons) are shown in the following table :—

	Vessels arriving		Totals
	From Foreign	Coastwise	
With Wireless	758	534	1,292
Without Wireless	330	152	482
Totals	1,088	686	1,774

These inquiries have been going on since 1926, and it will be seen from the following table that there has been but little, if any, increase in the proportion of vessels with wireless installations arriving at this port :—

Year	Percentage of Vessels with Wireless Installations		
	From Foreign	Coastwise	All Arrivals
1926	67·3	52·1	63·9
1927	75·6	74·8	75·4
1928	78·6	67·0	75·4
1929	74·8	68·8	73·2
1930	69·9	72·0	70·5
1931	71·1	77·2	72·9
1932	67·1	69·2	67·8
1933	67·9	77·5	71·4
1934	69·7	77·8	72·8

Cases of Infectious Disease landed from Vessels.—The following table shows the nature of 14 cases of notifiable infectious disease landed from vessels during the year :—

Ministry of Health Table C.

Disease	Number of Cases during 1934		Number of Vessels concerned	Average Number of Cases for previous 5 years
	Passengers	Crew		
Diphtheria	1	1	0·2
Enteric Fever	1	1	2·2
Dysentery	1	1	1·6
Malaria	5	3	10·0
Tuberculosis	6	5	7·8

These were dealt with as follows :—

Disease	Admitted to Cardiff Isolation Hospital	Admitted to Royal Hamadryad Seamen's Hospital	Allowed to return Home	Treated aboard Ship	Totals
Diphtheria	1	....	....	....	1
Enteric Fever	1	....	....	....	1
Dysentery ....	....	1	....	....	1
Malaria ....	....	5	....	....	5
Tuberculosis ....	....	2*	3	1	6
Totals	2	8	3	1	14

* Subsequently transferred to the City Lodge Hospital.

In addition to the above-mentioned cases, one case of measles (not notifiable) was landed from a vessel and removed to the Cardiff Isolation Hospital for treatment.

Other Cases of Infectious Disease.—Twenty-two other cases of infectious disease that were dealt with by the port sanitary staff were ascertained to fall properly within the province of urban administration, and were referred to the districts to which they belonged, as follows :—

Disease	Cardiff	Barry	Totals
Diphtheria	1	....	1
Pneumonia	1	....	1
Dysentery	1	....	1
Malaria .....	....	6	6
Tuberculosis	13	....	13
Totals	16	6	22

Cases of Infectious Disease occurring on Vessels during the Voyage but disposed of prior to Arrival.—Twenty-seven cases of infectious disease were reported to have occurred on 15 vessels during the voyage and were disposed of prior to arrival, as follows :—

Ministry of Health Table D.

Disease	Number of Cases during 1934		Number of Vessels concerned	Average Number of Cases for previous 5 years
	Passengers	Crew		
Smallpox	3	1	0·6
Enteric Fever	6	3	2·0
Pneumonia	5	5	1·0
Malaria	12	5	14·2
Tuberculosis	1	1	2·2

Cleansing and Disinfection.—Forty-nine seamen suffering from scabies were treated at the Cleansing Station belonging to the Cardiff City Council, their clothing being disinfected at the Disinfecting Station, which is situated adjacently. One-hundred and forty vessels were reported as being infested with bugs, and, after inspection, notices were served requiring the masters to take all necessary steps to eradicate them. Verminous or infected beds to the number of 1,323 were destroyed.

Venereal Disease.—The following tabular statement shows the number of cases of venereal disease among seamen dealt with at the treatment centre at the Royal Hamadryad Seamen's Hospital each year since 1925 :—

Year	Persons attending at the Centre for the First Time					Total Attendances	Aggregate Number of In-patient Days
	Syphilis	Soft Chancre	Gonorrhoea	Conditions other than Venereal	Totals		
1925	200	110	291	15	616	16,008	3,104
1926	197	93	256	19	565	12,702	2,536
1927	261	86	277	16	640	13,995	2,426
1928	205	83	344	14	646	15,347	3,195
1929	239	96	348	21	704	15,027	2,093
1930	235	112	367	17	731	12,670	1,639
1931	176	84	209	18	487	9,853	1,372
1932	198	95	297	19	609	10,004	1,707
1933	194	86	255	14	549	9,918	2,220
1934	190	90	285	25	590	9,717	2,185

The treatment centre forms part of the scheme of the Cardiff City Council for the diagnosis and treatment of venereal disease, and further details of the work undertaken during 1934 are contained in the report on the general health service of the city.

Thirty cases of venereal disease came to the knowledge of officers of the Authority during the year and were recommended for treatment at the centre.

Psittacosis.—The number of parrots dealt with under the Parrots (Prohibition of Import) Regulations, 1930, with the object of preventing the introduction of psittacosis, was 39.

V.—MEASURES AGAINST RODENTS.

It is part of the routine duty of inspectors to examine all vessels carefully for evidence of rat infestation. Deratisation of vessels is carried out by sulphur dioxide or hydrocyanic acid gas, the work being undertaken by private contractors under the supervision of officers of the department. During the year, 2,584 rats were destroyed by this method, and, of these, 310 were submitted to the Cardiff and County Public Health Laboratory for examination for the detection of plague.

During 1934 the number of deratisation certificates issued was 126 and the number of deratisation exemption certificates issued was 328, making a total of 454. The fees received by the Port Sanitary Authority in respect of certificates during the year amounted to £824 4s. 0d.

On all vessels from plague-infected ports and on all grain-laden vessels arriving at the port a rat-catcher is employed. By this means 179 rats were caught, 79 of which were examined for plague. Twenty-one of the latter were also submitted to the Department of Zoology of the National Museum of Wales for classification and identification of their parasitic fleas.

To prevent the passage of rats from ships to the shore, the use of rat-guards on mooring ropes is insisted upon and gangways are raised at night-time whenever possible. Advice regarding the rat-proofing of vessels is given to masters and other ships officers when necessary.

Systematic visits are paid by inspectors to quays, wharves and warehouses in the vicinity of the docks, and owners and occupiers are advised as to the best means of eradicating rodents. In most instances warehouses are reasonably rat-proof, possessing concrete floors and sliding, close-fitting doors. The importance of rendering all buildings near the docks rat-proof is constantly emphasised on owners and occupiers by the inspectors.

Extensive baiting around the docks is systematically undertaken by the dock owners (the Great Western Railway Company) and by owners and occupiers of premises in the vicinity of the docks under the supervision of officers of the department. During the year, 167,377 poison baits were laid and 3,638 rats and 730 mice were found dead as a result of these measures.

In May, 1934, a rat-catcher was appointed in a whole-time capacity, and since June, 1934, a rat survey of the port has been conducted. For this purpose the port sanitary district has been grouped into four areas, as follows :—

- No. 1. Penarth Dock, Windsor Slipway to Glamorganshire Canal Entrance.
- No. 2. Glamorganshire Canal, West Dock to West Side of East Dock.
- No. 3. East Side of East Dock to North Side of Roath Dock.
- No. 4. South Side of Roath Dock, Roath Basin and Queen Alexandra Dock

The rat-catcher is engaged for a period of one week on each area. Traps are set and the live rats caught are submitted to the Department of Zoology of the National Museum of Wales for classification and identification of their parasitic fleas and later to the Cardiff and County Public Health Laboratory for the detection of plague.

The whole district is being surveyed in this way at least once every four weeks, and valuable information is being obtained as to the prevalence of rodents, their species and the extent of their infestation by fleas. To the end of the year, 161 rats had been caught under this scheme, of which 103 were submitted for classification, 102 being subsequently examined for plague.

Ministry of Health Table F.

(b) Docks, Quays, Wharves and Warehouses.

[illegible]

Ministry of Health Table G.

MEASURES OF RAT DESTRUCTION ON PLAGUE "INFECTED" OR "SUSPECTED" VESSELS OR VESSELS FROM PLAGUE INFECTED PORTS ARRIVING IN THE PORT DURING THE YEAR.

Total Number of such Vessels arriving	Number of such Vessels fumigated by SO ₂	Number of Rats killed	Number of such Vessels fumigated by HCN	Number of Rats killed	Number of such Vessels on which trapping, poisoning, &c., were employed	Number of Rats killed	Number of such Vessels on which measures of Rat destruction were not carried out
1	2	3	4	5	6	7	8
42	2	1	3	193	6	40	31

Ministry of Health Table H.

DERATISATION CERTIFICATES AND DERATISATION EXEMPTION CERTIFICATES ISSUED DURING THE YEAR.

NET TONNAGE	No. of Ships	No. of Deratisation Certificates issued					No. of Deratisation Exemption Certificates Issued	Total Certificates Issued
		After fumigation with			After Trapping, Poisoning, etc.	Total		
		HCN	Sulphur	HCN and Sulphur				
1	2	3	4	5	6	7	8	9
Ships up to 300 tons	84	1	...	...	...	1	83	84
" from 301 tons to 1,000 tons	75	...	...	...	...	...	75	75
" from 1,001 tons to 3,000 tons	218	52	37	...	...	89	129	218
" from 3,001 tons to 10,000 tons	77	17	19	...	...	36	41	77
" over 10,000 tons	...	..	...	...	...	...	...	...
Totals	454	70	56	...	...	126	328	454

There has been a considerable reduction in the number of rats infesting ships. This has led to a slight increase in the proportion of exemptions from fumigation granted to masters on request for inspection of ships with a view to issuing of certificates. The increase in the proportion of deratisation exemption certificates granted at this port since 1930 is shown in the following table :—

Year	Deratisation Certificates		Deratisation Exemption Certificates		Totals
	Number	Percentage	Number	Percentage	
1930 ...	236	36	420	64	656
1931	195	32	407	68	602
1932 ...	121	23	411	77	532
1933 ...	124	26	353	74	477
1934	126	28	328	72	454

AN ANALYSIS OF DATA REGARDING RATS AND RAT-FLEAS OBTAINED OVER A PERIOD OF YEARS FROM THE PORT AND CITY OF CARDIFF.

By Colin Matheson, M.A., B.Sc., *Keeper of Zoology, National Museum of Wales.*

SECTION I.

SPECIMENS FROM PREMISES ON THE DOCKS.

Data regarding fleas off rats from the warehouses and other premises on Cardiff docks were last published in the Medical Officer of Health's report for the year 1928. The rats subsequently received from the docks, up to the end of 1934, numbered altogether 360 (274 black* rats and 86 brown). All these were examined for fleas, with the following results :—*Ceratophyllus fasciatus*, 572 ; *Xenopsylla cheopis*, 45 ; *Lep-topsylla segnis*, 13 ; *Ctenocephalus felis*, 1 ; a total of 631 fleas.

During the past few years there has been a steady increase in the work of deratisation of ships in terms of the International Sanitary Convention, 1926. According to the Medical Officer of Health's report for 1930, the returns of the Ministry of Health indicated that more work of this kind was done in Cardiff than in any other port in the United Kingdom except London. This work, commenced in 1928, was continued on a larger scale in the following year. In that year the Minister of Health gave formal effect to Article 28 of the International Sanitary Convention by making the Public Health (Deratisation of Ships) Regulations, 1929, which came into force on 1st January, 1930, since when it has been obligatory on masters of vessels coming from a foreign port to produce a certificate issued at an approved port within the past six months. Since that time there has been among the certificates issued at Cardiff a gradual increase in the proportion of exemption certificates as compared with deratisation certificates.

*Under this name are included, throughout this report, all the three forms :—*Rattus rattus* *rattus*, *R. r. frugivorus*, and *R. r. alexandrinus*.

One would expect, therefore, a reduction in the number of rats from abroad entering Cardiff docks on ships, and a concomitant reduction in the numbers of a flea like *Xenopsylla cheopis*, which investigations in previous years proved to be by far the commonest parasite on ship-rats at Cardiff. (See Annual Reports, 1922-28).

With regard to fleas of rats from dock premises, it is interesting to note that in an investigation on rats and rat-fleas from docks at the Port of London, 2,246 fleas were collected in 1932, not one of which was *X. cheopis*; while in 1933, out of 913 fleas, only two were *X. cheopis*.*

As a certain amount of data regarding fleas from dock-warehouse rats at Cardiff has been collected in every year (with one exception) from 1922 onwards, it seems worth while investigating whether any change in the relative numbers of *X. cheopis* has occurred during that time. Statistics as to the total number of fleas, and the number of each species, found on dock-warehouse rats are available for the period 1926-34. The following table gives the total number of fleas and the number of *X. cheopis* in each of the two periods 1926-29 and 1930-34 :—

Year	Number of Rats examined	Total Number of Fleas	Number of <i>X. c.</i>	Year	Number of Rats examined	Total Number of Fleas	Number of <i>X. c.</i>
1926	33	31	....	1930	134	222	....
1927	20	20	10	1931	51	33	....
1928	90	83	28	1932	23	11	....
1929	50	131	18	1934†	102	234	27
Totals	193	265	56	Totals	310	500	27

Therefore for the four years 1926-29 inclusive *X. cheopis* numbered 21·1 per cent. of all the fleas found, whereas for the period 1930-34 the proportion of *X. cheopis* sank to 5·4 per cent.

A high proportion of *X. cheopis* in the earlier years is also suggested by the data for 1922-25 inclusive; for this period only the number of samples of each species of flea was recorded, the number of individual fleas in each sample not being available. We find, however, that out of a total of 24 samples of fleas from dock-warehouse rats taken in this period, 8 were composed of *X. cheopis*—that is, 33·3 per cent.

* See *Annual Reports* for 1932 and 1933 of the Medical Officer of Health for the Port of London.

† No rats from the docks were submitted for examination in 1933.

If, in order to get strictly comparable data over the whole period, we tabulate the number of samples of fleas found each year, instead of the number of individual fleas, we have :—

Year	Total Number of Samples	Total Number of <i>X. c.</i> Samples	Year	Total Number of Samples	Total Number of <i>X. c.</i> Samples	Year	Total Number of Samples	Total Number of <i>X. c.</i> Samples
1922	6	2	1926	6	....	1930	50	....
1923	5	4	1927	6	3	1931	7	....
1924	4	2	1928	20	6	1932	4	....
1925	9	....	1929	15	5	1934	32	3*
Total	24	8	Total	47	14	Total	93	3
As percentage of Total...	100	33·3	As percentage of Total	100	29·8	As percentage of Total...	100	3·2

* It is suggestive that, whereas in previous years the samples of *X. cheopis* were usually found at intervals throughout the year, these three in 1934 all occurred within a few days of each other—the first (7 fleas) on October 2nd from the East Dock, the second (19 fleas) on October 3rd from Roath Dock, and the third (1 flea) on October 10th from Queen Alexandra Dock.

Taking the total number of samples up to and including 1929, we find that out of 71 samples examined, 22, or 31·0 per cent. were *X. cheopis*, whereas for the period 1930-34, out of 93 samples of fleas only 3, or 3·2 per cent., were *X. cheopis*.

The possibility has to be considered that this is due to the proportion of black rats (the normal hosts of *X. cheopis*) being larger in the former period; thus, for 1926-29 black rats numbered 180 out of 193, or 93·3 per cent., as against 227 out of 310, or 73·2 per cent., during 1930-34.

We find, however, that of 196 *C. fasciatus* found in 1926-29, 168 were from black rats, 7 from brown, and 21 from a mixed sample of black and brown (which included also 13 *L. segnis*); while the 56 *X. cheopis* were all from black rats. *X. cheopis* therefore constituted at least 21·7 per cent. of all the black rat fleas. In the period 1930-34, of 472 *C. fasciatus* 275 were from black rats, 185 from brown and 12 from mixed samples of black and brown rats; the one *Ct. felis* was from a black rat, and the 27 *X. cheopis* were also from this species; *X. cheopis* therefore constituted at most 8·9 per cent. of the fleas from black rats during this period. It will be seen that, if there has in fact been the decrease in *X. cheopis* suggested by our figures, it is not to be accounted for by the smaller proportion of black rats submitted for examination.

Comparison, therefore, of the data for three successive quadrennial periods gives some reason for suggesting that there has been a decline in the proportion of *X. cheopis* among rats from premises on Cardiff docks within recent years. It seems permissible further to suggest that this may be in some measure associated with a decline in the number of rats, and so of rat-parasites, arriving on ships from abroad; though we have to consider that other factors in addition to the enforcement of the International Sanitary Convention recommendations have perhaps contributed to this decline. Thus the shipping statistics for the port for the past 13 years show that, whereas the number of arrivals of vessels from abroad averaged 3,165 per annum for the period 1922-29 inclusive, with an average tonnage of 3,416,343, the average number for the period 1930-34 was 2,285, with an average tonnage of 2,379,095.

In summing up, we may confine ourselves to pointing out that the figures suggest a decrease in the proportion of *X. cheopis* among fleas on rats from the docks; that such a decrease may possibly be associated to some extent with the measures recommended by the International Sanitary Convention; but that data for subsequent years are desirable before it can be established whether the decrease or disappearance of *X. cheopis* is, in fact, a permanent state of affairs.

SECTION II.

RATS AND RAT-FLEAS FROM THE CITY AREA.

(a) *Rats*.—During the years 1928-33 inclusive, 9,071 rats were examined from premises throughout the city, of which 8,520 were brown and 551 were black rats. These figures, giving a proportion of 94 per cent. brown and 6 per cent. black rats, serve only further to confirm the estimate given in the report for 1931 as to the relative proportions of the two species in the city, and do not require any comment.

It seems, however, worth while pointing out that additional confirmation has been received also of another point mentioned in the report for 1931, namely, that the black rat population in the city area consists to some extent at least of resident and breeding specimens and not merely of casual vagrants from the docks. Some places have been trapped regularly each year since the investigation began in 1928, and have consistently yielded black rats—sometimes quite young or at most half-grown. It is true that some of these places are shops which would regularly be receiving consignments of goods from the docks, which might harbour rats, but this does not hold in every case; and the fact remains that, whatever the explanation, one can be sure of receiving black rats, almost at any time, from any of these localities.

(b) *Fleas*.—Altogether, 3,777 fleas were taken from the 6,504 rats (6,225 brown and 279 black) trapped in the city during the period 1928-31 inclusive; an average of 0.58 fleas per rat, as against 1.44 fleas per rat taken from rats from dock-premises during the same period. The identifications of these for each year are given in the table below:

Flea	Number in 1928	Number in 1929	Number in 1930	Number in 1931	Totals	As Per- centage of Total
<i>Ceratophyllus fasciatus</i>	321	733	1,010	1,439	3,503	92.75
<i>Xenopsylla cheopis</i> ...	23	19	76	32	150	3.97
<i>Ctenophthalmus agyrtes</i> <i>celticus</i>	2	78	1	14	95	2.52
<i>Leptopsylla segnis</i>	4	3	1	....	8	} 0.76
<i>Ceratophyllus londiniensis</i> ...	....	....	11	....	11	
<i>Ceratophyllus gallinae</i> ....	....	....	2	....	2	
<i>Ceratophyllus walkeri</i> ...	....	....	....	2	2	
<i>Ctenocephalus felis</i>	2	1	....	1	4	
<i>Ctenocephalus canis</i>	1	....	....	....	1	
<i>Hystrichopsylla talpae</i> ....	....	1	...	....	1	
Totals	353	835	1,101	1,488	3,777	100.00

Ceratophyllus fasciatus is, of course, the typical brown rat flea, and the great preponderance of this species is only what one would expect. It was, however, found also quite often on black rats (compare figures for the dock-warehouse rats).

Ctenophthalmus agyrtus celticus is typically a parasite of field-mice, and the majority of these specimens were taken off rats from the vicinity of allotments and workmen's sheds on the outskirts of the town, where field-mice are probably common. Of the 95 specimens, only 2 were from black rats.

Among the casual occurrences, under which head we may include all the species except the first three on the list, only 5 *Leptopsylla segnis*, 2 *Ctenocephalus felis* and 1 *Ct. canis*, a total of 8, occurred on black rats, the remaining 21 being on brown.

Of the 150 *X. cheopis* taken, the great majority were not on black, but on brown rats, 124 being from brown and only 26 from black rats. As, however, only 279 black rats were taken as against 6,225 brown, this gives an average of one *X. cheopis* to about every 10 black rats, compared with one *X. cheopis* to every 50 brown rats.

(c) *Distribution of X. cheopis in the City.*—As *X. cheopis* is, from the standpoint of public health, by far the most important of the fleas occurring on rats, it was thought advisable to work out the exact distribution of the 150 specimens found in the course of this investigation. The results as given in the following table are not without interest.

Number of <i>X. cheopis</i> found	Species of Rat on which found	Locality	Dates
39	Brown	Ethel Street	3/5/30, 21/11/30, 24/11/30, 29/11/30
22	Black	Ordell Street	17/12/28, 28/1/31
13	Brown	Pendoylan Street	16/2/31, 18/2/31
12	"	Cornwall Street	17/8/31, 21/8/31, 22/8/31
9	"	Love Lane	28/11/29, 28/1/30, 27/2/31
9	"	Conybeare Road	16/5/30, 27/11/30
9	"	Stafford Road	12/9/30
5	"	Tudor Street	23/4/30
4	"	Rutland Street	19/6/29, 3/5/30
4	"	Loftus Street	27/11/30
4	"	Daisy Street	19/7/29
3	Black	Portmanmoor Road	7/5/30
2	Brown	Wyndham Crescent	18/7/29
2	"	Clifton Street	20/7/28, 16/9/30
2	"	Hirwain Street	10/4/29
2	"	Adam Street	2/10/28, 17/1/31
1	"	Pumping Station, Penarth Road	10/3/28
1	"	Herbert Street	10/6/29
1	Black	Aberystwyth Street	13/6/29
1	Brown	Newport Road	22/6/29
1	"	Penylan	25/9/29
1	"	Queen Street	1/10/29
1	"	Bridge Street	20/2/30
1	"	Garesfield Street	23/7/30
1	"	Bute Street	28/11/30

If the above distribution be plotted on a map of Cardiff (see accompanying figure) it will at once be apparent that practically all the specimens of *X. cheopis* fall into one or other of four small areas. These are marked on the figure as areas A, B, C and D.

Area A includes Ethel Street, Daisy Street, Loftus Street and Conybeare Road; from this area 56 out of a total of 150 *X. cheopis* have been obtained.

From area B, which includes Tudor Street, Rutland Street, Cornwall Street and Stafford Road, altogether 30 *X. cheopis* have been obtained.

Area C, including Bridge Street, Love Lane, Adam Street, Pendoylan Street and Herbert Street, yielded 26 specimens.

Area D—Ordell Street, Aberystwyth Street, Portmanmoor Road—also yielded 26 specimens.

Wyndham Crescent, which gave 2 specimens, may—though at some distance from it—be conveniently associated with area A; Queen Street, Newport Road and Bute Street, which each gave 1 specimen, with area C; and Clifton Street and Garesfield Street, which gave 3 specimens, with area D. This leaves only three records of *X. cheopis* which seem definitely casual and isolated from any of the others—those at Hirwain Street (2 specimens), Penylan (1) and Penarth Road (1).

Three of the main areas are where one might expect to find them, namely, at no great distance from the docks (though it is rather surprising, from this point of view, that the Bute Street district has yielded only one specimen).

The other area (A), however, which yielded the largest number of fleas, is a long way from the docks. The reason for the concentration of *X. cheopis* in this part of the Canton district is not clear—analysis of the records shows that it is certainly not due to any specially intensive trapping there, nor (as will be seen from the list) to a concentration of black rats in that area—all these *X. cheopis* were from brown rats. It seems best for the present simply to record the fact, in itself of interest from the public health point of view, without assigning reasons for it.

The data then indicate that the distribution of *X. cheopis* in the city was localised almost entirely in the four comparatively small areas indicated on the figure; and as the figure is based on examination of 6,504 rats (and 3,777 fleas of various species found on them) caught fairly uniformly throughout all parts of the city over a period of four years, it can be taken as representing, with a fair amount of accuracy, the actual state of affairs as regards the distribution of the plague-flea during that period.

DISTRIBUTION OF *X. CHEOPIS* IN THE CITY OF CARDIFF.

Areas A to D indicate areas of maximum concentration of *X. cheopis*.

The stars represent scattered occurrences of *X. cheopis* (in no case more than three specimens).

It should be noted that the map shows the distribution of *X. cheopis* in the city only and not the docks.

(d) *Total Monthly Distribution of Flea-Infestation among City Rats, 1/3/28-31/12/31.*

The following table shows the number of rats examined and the total flea-index (average number of fleas per rat) for each month since the commencement of the investigation :—

Year		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	Number of Rats	...	...	114	51	49	28	47	93	96	110	112	61
	Total Flea Index	...	...	0.17	0.43	0.78	1.14	0.23	0.31	0.30	0.67	0.36	0.97
1929	Number of Rats	43	34	13	16	38	76	113	186	120	109	115	189
	Total Flea Index	0.60	0.29	0.08	1.25	0.89	0.83	1.27	0.39	0.82	2.49	0.46	0.23
1930	Number of Rats	97	129	151	123	131	176	284	164	224	170	219	213
	Total Flea Index	0.31	0.41	0.80	0.81	0.36	0.62	0.45	0.34	0.72	0.52	0.58	0.37
1931	Number of Rats	92	182	113	147	471	261	311	223	176	218	295	123
	Total Flea Index	0.22	0.40	0.44	0.35	0.27	1.42	0.91	1.02	0.39	0.36	0.30	0.40

Analysis of these figures as a whole shows that (though it is considerably obscured by irregularities) there is a fairly definite tendency for a rise in the flea-index in the summer months, followed by a fall towards the end of the year (a tendency best illustrated by the figures for 1931). June is the only month in which the flea-index has exceeded unity on two occasions, and of the total of six occasions when the index has been above unity, five lie between April and August.

The remarkably high index of 2.49 for October, 1929, is probably to be accounted for in part by the fact that a large number (53) of *Ctenophthalmus agyrtes celticus*, typically a parasite of field-mice, was included in the figures for this month, taken off rats trapped outdoors near comparatively open country; more trapping having been done in these localities during this month than at any other time. Even so, there remain, out of the 271 fleas found on the 109 rats, 218 specimens of *Ceratophyllus fasciatus*, giving an index of 2.00. It is possible that rats from habitats of this type are normally infested more heavily with fleas; and in this connection it may be noticed that Trimble and Sherrard*, in a recent comparison of rats from various types of habitat in and around Los Angeles, found (though the total number of rats examined was rather small) that those from open fields had the highest flea-index.

* *Rat and Rat-flea Survey of Los Angeles Harbour*, U.S. Public Health Reports, Vol. 50, No. 3 (18/1/35), p. 76.

VI.—HYGIENE OF CREWS' SPACES, ETC.

The unsatisfactory condition of the spaces occupied by sailors and firemen on vessels should be mentioned. There has been a marked increase in the number of vessels arriving at this port during recent years—both British and foreign—found with the crews' quarters in a dirty and verminous condition, as will be seen from the annexed diagram, which also shows the proportion of structural defects found. Dirty and verminous conditions of vessels are easily remediable, but, in many cases, there is an apparent lack of interest and supervision on the part of the persons responsible.

It is only by close supervision by masters and other officers that this condition of affairs will be remedied, and steps should be taken to gain the co-operation of ship-owners with a view to instructions being issued by them to masters to the effect that the accommodation provided for members of the crew should be inspected regularly.

It should be mentioned, however, that several local shipowners are taking a serious view of this question. They have issued instructions to their ships' officers, informing them that it is their duty to see that the crews' quarters are kept in a clean condition, and this action is having the effect desired.

During the year, 4,414 vessels, with a tonnage of 3,594,114, were visited by inspectors on arrival, or as soon afterwards as practicable. The number of persons in the crews carried by these vessels was 70,113. In addition, 5,220 re-inspections of ships in dock were made. Five-hundred and fourteen orders were given to masters and others in connection with nuisances and sanitary defects.

Ministry of Health Table J.

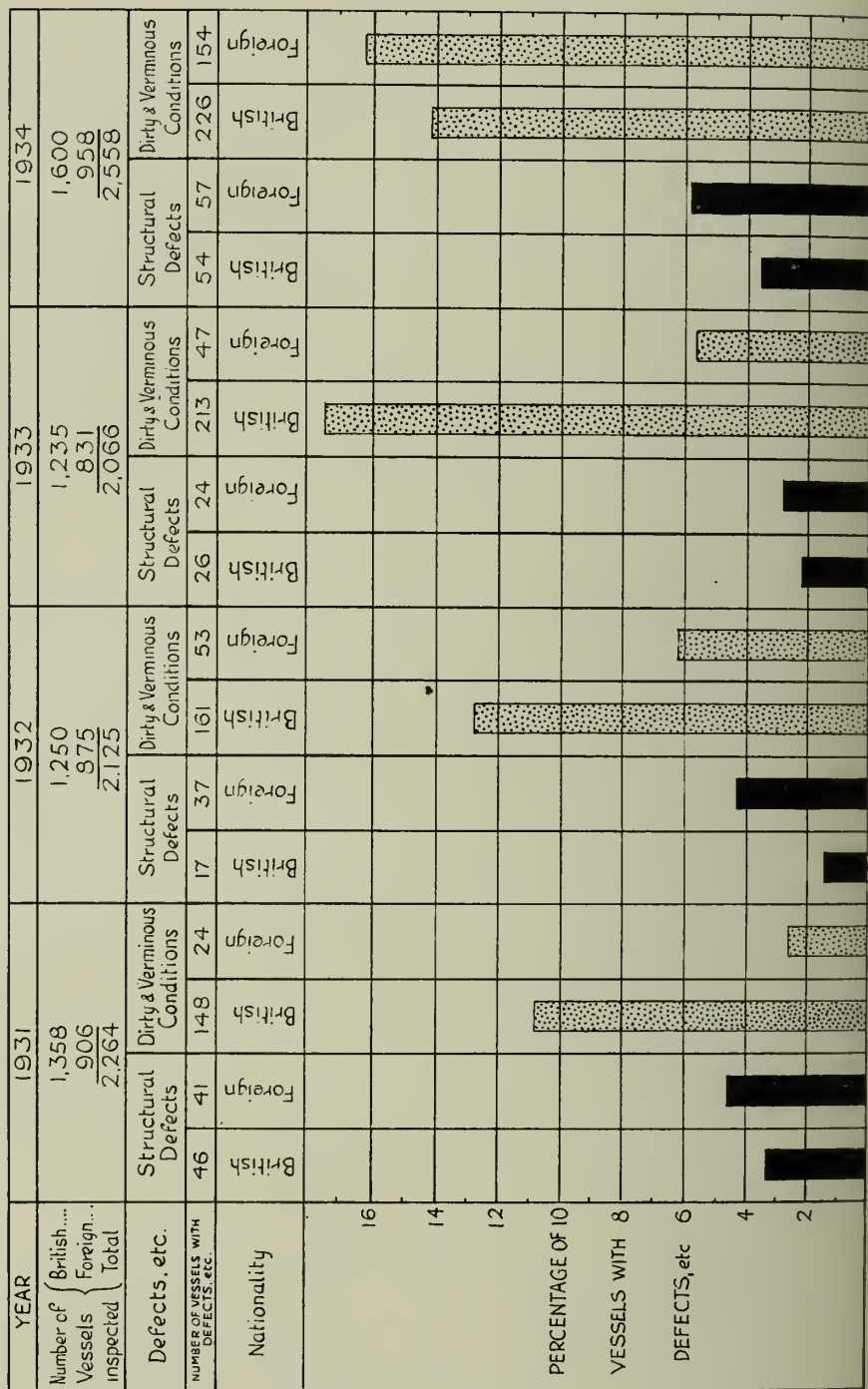
CLASSIFICATION OF NUISANCES.

Nationality of Vessel	Number Inspected during the year	Defects of original construction	Structural defects through wear and tear	Dirt, vermin and other conditions prejudicial to health
British	1,600	3	131	589
Other Nations ..	958	....	164	445

CARDIFF PORT SANITARY AUTHORITY

INSPECTION OF SHIPPING

STRUCTURAL DEFECTS AND DIRTY AND VERMINOUS CONDITIONS



The following table shows the number of the defects referred to in the preceding table which were remedied during the year :—

Nationality of Vessel	Defects of original construction	Structural defects through wear and tear	Dirt, vermin and other conditions prejudicial to health
British....	3	119	584
Other Nations		155	437

Imported Meat.—In addition to the foodstuffs referred to above, eight cargoes of frozen meat were imported, the quantities being as follows :—

Carcases of lamb	....	....	80,068
Carcases of pork	....	....	2,697
Carcases of mutton	....	....	20,386
Haunches of mutton	....	....	313
Quarters of mutton	....	....	1,109
Quarters of beef	....	....	18,767
Boneless beef (bags)	....	....	1,771
Buttocks of beef	....	....	484
Crops of beef	....	....	2,567
Ox livers (bags)	....	....	71
Kidneys (boxes)	....	....	88
Tails (bags)	....	....	50
Rabbits (boxes)	....	....	1,583

Public Health (Imported Food) Regulations, 1925, and Public Health (Imported Food) Amendment Regulations, 1933.—The total quantity of food withheld from human consumption during the year was 67 tons 16 cwt. 87 lb.

Twenty-one samples were submitted to the Public Analyst for analysis under the Public Health (Imported Food) Regulations, comprising :—

Barley, Pearl	....	....	....	4
Ginger, Dry	....	....	....	1
Glucose	....	....	....	1
Groats	....	....	....	1
Pears	....	....	....	1
Raisins	....	....	....	2
Sago	....	....	....	1
Salt	....	....	....	1
Sardines	....	....	....	7
Sardine paste	....	....	....	1
Sultanas	....	....	....	1
Total				21

Twenty of these samples were reported to be genuine or to contain preservatives within the limits laid down by the Public Health (Preservatives, etc., in Food) Regulations, and one of the samples of pearl barley was reported to contain a preservative prohibited by the Regulations. As the consignment of pearl barley from which the sample was taken was imported for use as ships' stores no action was taken.

Public Health (Imported Milk) Regulations, 1926.—No fresh milk was imported during the year.

Public Health (Preservatives, etc., in Food) Regulations, 1925-27.—Thirty samples of food were submitted to the Public Analyst for analysis as to the presence of preservatives, comprising :—

Orange juice	....	....	....	1
Raisins	....	....	....	29
Total				30

All of these samples were reported to be genuine or to contain preservatives within the limits laid down by the Regulations.

Bacteriological Examinations.—Two samples of condensed milk and two samples of canned tomatoes were submitted for bacteriological examination. The samples of condensed milk were reported to show no evidence of unsoundness and the samples of canned tomatoes were reported to be practically sterile.

VIII.—MISCELLANEOUS.

Medical Inspection of Aliens.—The following is a summary of the work done during the year in connection with the medical inspection of aliens :—

	Total Number.	Number Inspected by Medical Inspectors.
Aliens (excluding alien seamen) landing at the port	241	112
Aliens refused permission to land by Immigration Officer	8	—
Totals	249	112
Number of vessels carrying alien passengers	....	94
Number of such vessels dealt with by the Medical Inspector	....	9
Analysis of aliens landing :—		
Residents returning	....	5
In transit	....	14
Visitors	....	77
Business	....	116
Contract seamen	....	28
Ministry of Labour permit	....	1
Coming to settle, not holding Ministry of Labour permits	....	—
Total	....	241

Of the 112 aliens medically inspected, 107, who intended taking up employment and remaining in the country over three months, were referred by the Immigration Officer for detailed medical examination.

Diseases of Animals Acts, etc.—The various Orders under the Diseases of Animals Acts with reference to the importation of animals were strictly enforced during the year. Three hundred and sixty-two dogs, 630 cats and one fox were brought to the port on vessels, and three vessels arrived direct from scheduled countries with 2 goats and 3 swine on board. All the vessels were visited regularly during their stay in port to ensure that the requirements of the Orders were observed.

Legal proceedings were taken against the masters of two vessels for infringements of the Animals (Importation) Order, 1930, fines and costs amounting to £2 7s. 6d. being imposed.

During the year, 5,597 head of cattle, 250 horses and one mule from Canada, were landed at the Imported Animals Wharf.

Canal Boats.—The Chief Port Sanitary Inspector, who is also Inspector of Canal Boats, has reported that he made 48 inspections of canal boats during the year and found infringements of the Regulations made under the Canal Boats Act, 1877, regarding painting in 16 instances and marking in one instance. Verbal instructions were given, and the infringements in each case were remedied. The number of boats (not propelled by motor) on the register was eight, each with accommodation for two males. The sanitary condition of the canal boats generally was satisfactory.

SCHOOL MEDICAL SERVICE.

I.—STAFF.

The medical staff consists of the School Medical Officer, a Deputy Medical Officer and nine Assistant Medical Officers (including two who are engaged in a part-time capacity). The members of the medical staff devote part time only to the school medical service, as they are also engaged in the work of other sections of the Public Health Department. Dr. Chris. J. McSweeney resigned his appointment as Deputy Medical Officer on 31st August, 1934, and Dr. Jean W. Smellie, who was appointed as an Assistant Medical Officer, commenced duty on 1st October, 1934. The vacancy for a Deputy Medical Officer was not filled until December, 1934, when Dr. W. Powell Phillips, an Assistant Medical Officer in the department, was appointed to the post. Dr. Phillips took over his new duties on 1st January, 1935. The usual annual changes of the two part-time Assistant Medical Officers took place on 1st October, 1934. The staff-time devoted by the Deputy Medical Officer and Assistant Medical Officers to the school medical service is equivalent to the whole time of four medical officers. There are now only two part-time Specialist Medical Officers (an Ophthalmic Surgeon and an Orthopaedic Surgeon), the operative treatment of nose and throat defects having been transferred from Gabalfa School Clinic to Llandough Hospital on 1st January, 1934, when the services of an Aural Surgeon and Anaesthetist in connection with the school medical service became unnecessary. Dr. J. W. Tudor Thomas resigned his appointment as Ophthalmic Surgeon in March, 1934, and his place was taken by Dr. Rupert J. Parry on 1st April, 1934.

There are four Dentists, four Dental-clerk Attendants, a Supervisor of Nurses, 11 Nurses, a Chief Clerk and 10 Clerks (eight of whom are females). The Supervisor of Nurses, two of the Nurses who are engaged in orthopaedic work and the Chief Clerk are also employed in other sections of the department. The number of nurses was reduced from 13 to 11 on 1st January, 1934, consequent upon the transfer of the operative treatment of nose and throat defects to Llandough Hospital, the two nurses concerned being transferred to fill vacancies in the health visiting staff. In addition, there were a few changes in the personnel of the clerical staff.

II.—CO-ORDINATION.

The school medical service is very completely co-ordinated with all the other work of the public health service under the Medical Officer of Health, who is also School Medical Officer. It will be seen from the particulars regarding the staff given above that, in addition to the School Medical Officer, the Deputy and Assistant Medical Officers and certain other members of the staff are engaged in the general public health service as well as the school medical service, thus linking up the latter with the other work of the department. Special mention may be made of the arrangements for the treatment of school children suffering from acute rheumatism at Lord Pontypridd Hospital (Dulwich House) and for the operative treatment of nose and throat defects at Llandough Hospital, both of which institutions are under the control of the Health Committee. The department also co-operates closely with the Education Department (including the school attendance officers), head teachers and all voluntary agencies in the city concerned with the health and welfare of school children.

III.—SCHOOL HYGIENE.

The Public Works Department of the City Council is primarily responsible for the sanitary and structural condition of the school buildings, but defects discovered by medical officers and sanitary inspectors are reported to the Director of Education, by whom they are referred to the appropriate quarters to be remedied.

As mentioned in the report for 1933, a complete review of the hygienic condition of the public elementary schools was undertaken during the year. The review was carried out by Sanitary Inspectors under the supervision of the Chief Sanitary Inspector. Each of the 53 schools (31 Council and 22 Non-provided), having 123 departments, was carefully inspected and reported upon fully under the following headings :—

- (a) Name of school and department.
- (b) Surroundings.
- (c) Ventilation.
- (d) Lighting.
- (e) Heating.
- (f) Type and condition of desks.
- (g) Type and condition of blackboards.
- (h) Type and condition of sanitary conveniences.
- (i) Type and condition of lavatories.
- (j) Playground accommodation.
- (k) Water supply for washing and drinking purposes.
- (l) Whether baths are provided.
- (m) Cleanliness of schoolrooms and cloakrooms.
- (n) Arrangements for drying children's clothes and boots.

The surroundings of many of the older schools, which are situated in thickly populated areas, cannot be regarded as ideal. The more modern schools have, of course, been erected in open and satisfactory surroundings.

The arrangements for the ventilation of class-rooms vary, and in some of the older schools are unsatisfactory. Greater care has been taken in providing efficient ventilation in the newer schools, but it may be said that, generally, having regard to the design of the older school buildings, the best possible arrangements for ventilation have been made.

The provision for the natural lighting of the schools also varies, depending mainly upon the time when the buildings were constructed. Artificial lighting is provided by means of electricity in 22 schools and by means of gas in the other 31.

The arrangements for heating the schools vary, central heating or central heating combined with open fireplaces having been installed in most instances. In other schools the methods of heating are open fireplaces only, open fireplaces combined with gas fires, slow combustion stoves or anthracite stoves.

Most of the senior schools are provided with dual desks, but in some of the older schools the desks provided seat more than two children and in a few instances as many as five or six. Single as well as dual desks are to be found in some schools. Tables and chairs are generally provided for babies in infants' schools. Old desks, however, are gradually being replaced by modern dual- and single-locker desks. During 1933-34, 173 dual-locker desks were provided, 521 were provided during 1934-35, and it is proposed during 1935-36 to provide 586 dual- and 36 single-locker desks.

Many schools still have blackboards with easels, although in the majority of schools there are swing blackboards.

Automatically flushed or hand-flushed pedestal sanitary conveniences have been installed in most of the schools, but in several schools the insanitary trough water-closet still exists. These trough closets should be replaced by pedestal water-closets at the earliest opportunity. The urinals are constructed of glazed earthenware, slate or cement (usually tarred).

The type and condition of washing facilities also vary. In most of the schools glazed earthenware washing basins have been installed, but in some of the schools the facilities for washing are both insufficient and unsatisfactory.

Adequate playground accommodation is provided in the newer schools, but in some of the older schools the accommodation is inadequate. The majority of the playgrounds have asphalt or tar macadam surfaces, but a few are paved or surfaced with gravel. In some cases playgrounds are not well drained and in others the surfaces are defective. In a few instances playground shelters have not been provided.

A good supply of pure and soft water for drinking and washing purposes is provided in all the schools from the Cardiff Corporation supply.

Baths have not been installed in any of the schools.

From the point of view of cleanliness, the class-rooms and cloak-rooms in all schools were found to be satisfactory.

Special provision for drying children's clothes and boots has not been made, although there are hot-water radiators in the cloak-rooms of about half the schools.

Many of the old school buildings cannot be regarded as satisfactory, a few of them really requiring to be re-conditioned.

The hygienic condition of schools is of great importance, because unsatisfactory surroundings, ventilation, lighting, heating, sanitary conveniences and lavatory accommodation are prejudicial to health. Moreover, important lessons are learnt by the scholars in receiving their education in a hygienic environment.

During 1934 a Special Joint Committee considered the question of the equipment that should be provided for the schools in future. Amongst the recommendations of the Committee, which were adopted by the Education Committee, the following may be mentioned :—

(1) *Infants' Schools*.—

- (a) That tables and chairs be provided for babies only.
- (b) That dual-locker desks be supplied throughout the schools (excluding babies).
- (c) That the tables to be supplied be collapsible, with plain surface and coloured to suit individual schools.
- (d) That the cupboards to be supplied be dwarf cupboards and high cupboards (6 ft.) with adjustable shelves.

(2) *Senior Schools*.—

- (a) That the ordinary class-room cupboards be made with adjustable shelves.
- (b) That for needlework large baskets be supplied.
- (c) That for sewing, a cupboard with adjustable shelves be supplied.
- (d) That dual-locker desks be supplied for all boys', girls' and mixed schools, the frame to be girder section steel with foot-rest and two separate tip-up seats with each desk and tub-shaped back rails.
- (e) That a science desk be introduced as an experiment.
- (f) That pedestal desks be supplied with drawer to take the standard size register, it being understood that if a dais is required it would be supplied.
- (g) That with regard to blackboards—
 - (i) The board and easel be excluded absolutely.
 - (ii) The wall blackboard is the ideal blackboard provided the surface remains in good condition.
 - (iii) The swing blackboard is a useful blackboard provided the base is substantially heavy and that the swing mechanism is satisfactory.

IV.—MEDICAL INSPECTION.

The routine medical inspection of the following groups of children attending elementary schools was carried out as required by the Board of Education :—

- (a) Entrants within 12 months of admission.
- (b) Second age group, i.e., children between the ages of 8 and 9 years.
- (c) Third age group, i.e., children who had attained the age of 12 years.

All routine medical inspections are carried out at the schools, the parents of the children to be examined being notified beforehand and invited to be present. Children outside the routine age groups who are regarded by head teachers as requiring special attention are brought forward at the time routine inspections are taking place. Most of the special inspections, however, are conducted at the school clinics.

The numbers of elementary school children inspected at routine medical inspections were as follows :—

	Boys	Girls	Totals
Entrants	1,631	1,558	3,189
Second Age Group	1,453	1,166	2,619
Third Age Group	1,536	1,543	3,079
Totals	4,620	4,267	8,887

The number of elementary school children specially inspected and the number of re-inspections undertaken were as follows :—

	Boys	Girls	Totals
Special Inspections { At School	338	308	646
{ At School Clinic	2,392	2,997	5,389
Totals	2,730	3,305	6,035
Re-inspections { At School	816	721	1,537
{ At School Clinic	2,360	2,857	5,217
Totals	3,176	3,578	6,754

V.—FINDINGS OF MEDICAL INSPECTION.

Details of the diseases and defects found by routine and special medical inspection are given in Table IIA, page 156. Of the 8,887 elementary school children inspected at routine inspections, 1,876, or 21·1 per cent., were found to require treatment (excluding uncleanness and dental disease), the percentages of the three groups requiring treatment being as follows :—

Entrants	18·7 per cent.
Second Age Group	21·3 per cent.
Third Age Group	23·4 per cent.

The proportion of defective children found in the course of routine inspections has been fairly constant for several years, although there was a slight increase in 1934 in each of the three groups. The corresponding percentages for 1933 were as follows :—

Entrants	15·5 per cent.
Second Age Group	20·5 per cent.
Third Age Group	23·0 per cent.

It is probable that the increase was fortuitous and of no special significance.

Of the 6,035 individual children specially inspected, 3,273, or 54·2 per cent., were found to require treatment (excluding uncleanliness and dental disease).

The number and proportion of elementary school children in whom diseases or defects requiring treatment or to be kept under observation were found are shown in the following table :—

Diseases or Defects	Diseases or Defects found at Routine Inspection		Diseases or Defects found at Special Inspection	
	Number	Percentage	Number	Percentage
Malnutrition	127	1·40	59	0·98
Skin diseases	111	1·22	1,434	23·76
Defective vision and squint	720	7·94	182	3·01
External eye diseases	59	0·65	64	1·06
Defective hearing	81	0·89	69	1·14
Other ear diseases	143	1·58	164	2·72
Chronic tonsillitis	487	5·37	204	3·38
Adenoids only	27	0·30	23	0·38
Chronic tonsillitis and adenoids	143	1·58	63	1·04
Other nose and throat defects	69	0·76	187	3·10
Enlarged cervical glands	31	0·34	69	1·14
Defective speech	45	0·50	22	0·36
Diseases of the heart and circulation	380	4·19	311	5·15
Non-tuberculous diseases of the lungs	267	2·94	301	4·99
All forms of tuberculosis (including suspects)	12	0·13	53	0·88
Diseases of the nervous system	87	0·96	168	2·78
Deformities	108	1·19	45	0·74
Other diseases and defects (excluding uncleanliness and dental diseases)	608	6·70	1,134	18·79

Entrants.—Parents or guardians are asked to supply particulars as to the medical history of entrants prior to their routine medical inspection. During 1934 information was received regarding 2,645 of the 3,189 children inspected as entrants, from which the following table has been compiled :—

Diseases	Boys		Girls		Both Sexes	
	Number	Percentage	Number	Percentage	Number	Percentage
Measles	847	62·1	796	62·0	1,643	62·1
Whooping Cough	551	40·4	562	43·8	1,113	42·1
Chickenpox	308	22·6	284	22·2	592	22·4
Scarlet fever	119	8·6	103	8·0	222	8·4
Diphtheria	48	3·5	44	3·4	92	3·5
Rheumatism	16	1·2	14	1·1	30	1·1
Chorea	—	—	3	0·2	3	0·1
Tuberculosis	8	0·6	3	0·2	11	0·4
Bronchitis	53	3·9	48	3·7	101	3·8
Pneumonia	69	5·1	71	5·5	140	5·3
Other diseases	222	16·3	176	13·7	398	15·0

Of the 3,189 entrants medically inspected, 598 were found to require immediate treatment (excluding uncleanliness and dental diseases) and, in addition, many diseases or defects were found which required to be kept under observation. The following table shows *all* the diseases or defects found in 1,430 of the entrants inspected, whether requiring treatment or to be kept under observation :—

<i>Diseases or Defects.</i>				<i>Number</i>
Skin diseases	....	....	....	55
Defective vision	....	....	....	7
External eye diseases	....	....	....	81
Ear diseases	....	....	....	65
Diseases of nose and throat	....	....	....	384
Heart diseases	....	....	....	121
Anaemia	....	....	....	25
Lung diseases (non-tuberculous)	....	....	....	169
Tuberculosis—				
Pulmonary	....	....	....	—
Non-pulmonary	....	....	....	3
Dental diseases	....	....	....	692
Other defects and diseases	....	....	....	210
Total				1,812

Taking all diseases and defects into consideration, 44·8 per cent. of the entrants were found to be defective, as compared with 43·7 per cent. in 1933. and 37·6 per cent. in 1932.

Re-inspection of Children found with Defects.—When carrying out routine inspections at schools the medical officers re-inspect children previously found with certain diseases or defects. During 1934 the number of children re-inspected in this way was 1,765, the number of diseases or defects from which they had suffered being 2,010. The results of these re-inspections are given in the following table, from which it will be seen that of the total number of diseases or defects, 1,202 had been treated at the school clinics, 104 had been treated elsewhere and that 704 had not been treated.

	Cured or Improved	No Improvement	Worse	Total Number of Defects
TREATED AT SCHOOL CLINICS :—				
Eye diseases	430	20	—	450
Ear diseases	70	10	—	80
Diseases of nose and throat	137	11	—	148
Heart diseases	38	40	—	78
Anaemia	13	2	—	15
Lung diseases (non-tuberculous)	57	14	—	71
Tuberculosis—				
Pulmonary	—	—	—	—
Non-pulmonary	—	—	—	—
Nervous diseases	35	3	—	38
Deformities	27	15	—	42
Other defects and diseases (excluding uncleanness, infectious skin diseases, and dental diseases)	251	29	—	280
Totals	1,058	144	—	1,202
Percentage	88·0	12·0	—	—
TREATED ELSEWHERE :—				
Eye diseases	4	3	—	7
Ear diseases	2	2	—	4
Diseases of nose and throat	4	2	—	6
Heart diseases	1	3	—	4
Anaemia	2	1	—	3
Lung diseases (non-tuberculous)	7	—	—	7
Tuberculosis—				
Pulmonary	1	—	—	1
Non-pulmonary	6	—	—	6
Nervous diseases	4	2	—	6
Deformities	5	4	—	9
Other defects and diseases (excluding uncleanness, infectious skin diseases, and dental diseases)	45	6	—	51
Totals	81	23	—	104
Percentage	77·9	22·1	—	—
NOT TREATED :—				
Eye diseases	67	94	42	203
Ear diseases	4	17	—	21
Diseases of nose and throat	69	159	2	230
Heart diseases	61	35	—	96
Anaemia	2	—	—	2
Lung diseases (non-tuberculous)	33	10	—	43
Tuberculosis—				
Pulmonary	—	—	—	—
Non-pulmonary	—	—	—	—
Nervous diseases	2	2	—	4
Deformities	2	11	—	13
Other defects and diseases (excluding uncleanness, infectious skin diseases, and dental diseases)	45	47	—	92
Totals	285	375	44	704
Percentage	40·5	53·3	6·2	—
Grand Totals	1,424	542	44	2,010
Percentage	70·8	27·0	2·1	—

Since 1925 there has been a gradual increase in the proportion of defects that have been cured or have improved, as will be seen from the figures in the following table :—

	Percentage		
	Cured or Improved	Not Improved	Worse
1925	60·0	39·7	0·3
1926	58·9	40·4	0·7
1927	58·4	39·5	2·1
1928	60·7	36·8	2·5
1929	61·4	36·3	2·3
1930	62·4	35·3	2·3
1931	69·2	28·9	1·8
1932	65·4	31·8	2·8
1933	70·8	27·0	2·2
1934	70·8	27·0	2·1

VI.—“ FOLLOWING UP ” AND THE WORK OF SCHOOL NURSES.

In addition to the advice given by the medical officers to parents who are present at the inspection of their children, appropriate notices are sent directing their attention to diseases or defects discovered. Lists of defective children are also sent to head teachers with a view to their co-operation in seeing that treatment is obtained. As a result of these notices many children attend the school clinics for further inspection and or treatment or obtain treatment elsewhere without visits to their homes by school nurses. The parents of all children requiring treatment who are not seen at the clinics or are not otherwise ascertained to have received treatment are subsequently visited by school nurses, who impress upon them the need for treatment. The following is a summary of the work of the school nurses in this connection during the year :—

Diseases or Defects	First Visits	Revisits	Totals
Defects of vision	1,111	545	1,656
Defects of teeth	608	210	818
Defects of ear, nose and throat	660	261	921
Other defects	2,397	817	3,214
Totals	4,776	1,833	6,609

Amongst other work undertaken by the school nurses may be mentioned the systematic examination at the schools of children for uncleanness, attendance at the clinics in connection with medical inspection, medical treatment and dental treatment, the treatment of minor ailments under the supervision of medical officers, the following up of children who have received treatment at the clinics, and the cleansing at the Corporation Cleansing Station of children suffering from scabies.

As shown above, the total number of visits paid by the nurses to the homes of children was 6,609, and the following is a summary of other work done by them during the year :—

Number of—

Special visits to schools	388
Examinations of children for uncleanness	47,510
Children found with vermin and/or nits	2,255
Re-examinations of children previously found unclean	2,090
Children found to have been cleansed	472
Children suffering from scabies dealt with at the Cleansing Station	98
Number of baths given	150

VII.—ARRANGEMENTS FOR TREATMENT.

Malnutrition.—Children suffering from malnutrition are either referred for special inspection at the school clinics or followed up by the school nurses, and parents are advised as to appropriate methods of treatment. Free meals and milk are provided in financially necessitous cases. Cod-liver oil and malt, cod-liver oil, and iron and ammonium citrate are sold at the clinics at cost price for cases in which they are prescribed. In certain instances malnourished children are admitted to the Open-Air School (see page 151).

Uncleanliness.—Special attention is given by the school nurses to cases of uncleanliness (see page 141). Printed instructions are supplied to parents regarding methods of destroying vermin and nits, and special nit combs are sold by the department at cost price.

Minor Ailments and Diseases of the Skin.—The treatment of minor ailments and diseases of the skin is undertaken at the school clinics. Details of the treatment carried out during 1934 are given in the statistical tables (see page 160), from which it will be seen that 2,047 cases received treatment, as compared with 2,033 in 1933. Special attention is given to the treatment of ringworm; the number of cases treated by or under the supervision of the medical staff was 118, 18 of them being ringworm of the scalp. When necessary and with the consent of the parents, cases of scalp ringworm are treated by X-rays, and during 1934 three cases received this form of treatment. Arrangements have been made whereby nurses of the Queen's Institute of District Nursing render assistance in the home nursing and treatment of minor ailments, and particulars of the work undertaken by them during 1934 are shown in the following table :—

Diseases or Defects	Cases Carried over from 1933		Cases Referred for Treat- ment during 1934		Totals	
	Cases	Visits	Cases	Visits	Cases	Visits
Skin :—						
Impetigo	—	—	15	214	15	214
Other skin diseases	—	—	5	53	5	53
Minor eye defects	—	—	15	342	15	342
Minor ear defects	—	—	2	22	2	22
Miscellaneous	1	6	97	1,238	98	1,244
Totals	1	6	134	1,869	135	1,875

Visual Defects and External Eye Disease.—Visual defects and external eye diseases are treated at the school clinics. In addition to a medical officer on the staff who devotes part of his time to the work, a specialist ophthalmic surgeon is engaged for two sessions weekly. Spectacles are provided through the department at very reasonable prices, and in necessitous cases they are provided free of charge. Particulars of the treatment of visual defects are given on page 160, from which it will be seen that 1,786 children were dealt with at the clinics, 1,544 of whom were examined for errors of refraction and 242 were treated for other defects. Spectacles were prescribed for 1,433 children, and in 1,373 instances they were known to have been obtained.

The diseases and defects discovered in all the children who were dealt with at the vision clinics during the year are shown in the following table .—

Diseases or Defects	Number of Diseases or Defects		
	Boys	Girls	Totals
Squint	90	92	182
Errors of refraction—			
Hypermetropia	245	300	545
Myopia	122	108	230
Astigmatism—			
Hypermetropic	250	320	570
Myopic	102	87	189
Mixed	66	80	146
Conjunctivitis	58	71	129
Phlyctenular conjunctivitis ..	12	13	25
Blepharitis	52	78	130
Dacryocystitis	1	3	4
Keratitis	2	5	7
Interstitial keratitis	2	7	9
Coloboma of iris	—	1	1
Leucoma adhaerens	1	2	3
Corneal ulcer	5	2	7
Corneal nebulæ	19	24	43
Nystagmus	5	4	9
Injury to eye	1	2	3
Meibomian cyst	1	3	4
Cellulitis of eyelid	2	2	4
Optic neuritis	—	1	1
Ptosis	4	1	5
Choroiditis	1	1	2
Foreign body	1	—	1
Cataract—Congenital	5	2	7
Iritis	1	—	1
Entropium	—	1	1
Dermoid cyst	1	1	2
Sebaceous cyst	1	—	1
Totals	1,050	1,211	2,261

Nose and Throat Defects.—Children suffering from nose or throat defects who are found to require treatment are specially examined at the school clinics and those found to need operative treatment are admitted to Llandough Hospital. The children are admitted to hospital the day before the operation and, if well enough, are discharged the day following the operation. Owing to the long distance of Llandough Hospital from the centre of the city, the children are conveyed to and fro by motor ambulance. The number of defects treated at the clinics or hospital was 688, of which 292 were treated by operation (73 enlarged tonsils only, 3 adenoids only and 216 enlarged tonsils and adenoids).

Ear Disease and Defective Hearing.—The treatment of ear diseases or defects is carried out at the school clinics by or under the supervision of the medical officers. Many of the cases of otorrhoea are treated by zinc ionisation. Altogether, the number of defects treated at the clinics was 538 (included in the figures regarding the treatment of minor ailments elsewhere in this report).

An Audiometer—an instrument for testing the hearing of children—was purchased in March, 1934. The instrument is similar to a gramophone in operation, but has a number of headphones attached to it. Thirty-two children can be uniformly tested together. One 'phone is placed on the ear at a time, each ear being tested separately. The children record on a specially prepared form what they hear of a series of numbers

which are transmitted in a measured gradation of loudness and the numbers not recorded, being those not heard, form the measure of the defect of hearing.

An occasional school session a week has been given to the work, and the results are shown in the following statement :—

Number of children tested at school with Audiometer....	721
Number of children retested	188
Number found defective after second test	86
Number subsequently examined at school clinics :—	
(a) Found normal	28
(b) Found normal after appropriate treatment	12
(c) Requiring further treatment	6
	—
Failed to attend for further examination	46
	18

It will be seen that of 721 children tested, 86 were found to be deaf in varying degrees. The proportion found to be deaf was 11·9, which is higher than that found in other areas where the instrument has been used. Attempts to reduce this high percentage of children with impaired hearing have been made by occluding the ear not being tested, by placing cotton wool in the ear so as to eliminate all extraneous sound. This procedure has reduced the percentage to some extent, but further observations are necessary before a final decision can be made as to the reason for the disparity between the results obtained in Cardiff in comparison with those obtained elsewhere.

So far, owing to pressure of routine work, it has only been found possible to arrange for examination at the clinic of 64 of the 86 children recorded as deaf. Of these, 28 were found to hear the faintest whisper at 20 feet and their auditory apparatus appeared to be quite normal. Twelve were made normal after removal of wax from the ear and politzerization. Six required further treatment and 18 failed to attend after being sent for twice.

Dental Defects.—Dental inspection of children at the schools and treatment at the school clinics are undertaken by four school dentists, but the present staff is insufficient to overtake all the work requiring to be done. Not only is the number of staff insufficient but the present clinic accommodation is inadequate for the provision of further facilities for treatment.

Particulars of the work done during 1934 will be found on page 162. The total number of elementary school-children inspected by the dentists was 25,927, of whom 18,959 were found to require treatment. The number of children who were treated was 7,848, 3,239 of whom had previously received treatment.

Orthopaedic and Postural Defects.—Facilities are provided at one of the school clinics for the special examination and treatment of children suffering from orthopaedic and postural defects. Owing to the inadequacy of the clinic accommodation, the work has always been carried out under great difficulties, but proposals have now been adopted which will enable it to be done under much more satisfactory conditions in the near future. The new arrangements will be described in the next annual report. There is a medical officer on the staff of the department who specialises in dealing with children suffering from crippling defects and, in addition, a specialist orthopaedic surgeon is engaged in a consultative capacity at the clinics. The arrangements that have been in operation for several years whereby children requiring indoor hospital treatment are dealt with at an orthopaedic hospital—the Prince of Wales Hospital, Cardiff—are quite satisfactory. All the appliances required by children attending the clinic are also provided through the same institution.

The following is a summary of the work carried out at the orthopaedic clinic during 1934 :—

	<i>Children of School Age.</i>
<i>Consultation Clinic :—</i>	
Examined for first time	315
Recommended for treatment and/or appliances for first time	191
Recommended for further treatment and/or appliances	191
<i>Recommendations for :—</i>	
Treatment in Hospital	28
Treatment at Clinic (Special and Routine)	204
Appliances	18
Alterations to appliances	10
Special boots	8
Alterations to boots	117
Other forms of treatment	24
Treated at Clinic for first time	3
Attendances at Clinic....	891
<i>Routine treatment (massage, electricity, exercises, etc.) :—</i>	
Treated at Clinic for first time	187
Attendances for routine treatment	5,072

The following statement relates to treatment at and provision of appliances, etc., through the Prince of Wales' Hospital, Cardiff, during 1934 :—

	<i>Children of School Age.</i>
<i>Hospital treatment :—</i>	
Admitted to Prince of Wales' Hospital—	
(a) Day cases	—
(b) Other cases	22
Under treatment at Prince of Wales' Hospital at end of 1934	4
On Prince of Wales' Hospital waiting list at end of 1934—	
(a) Day cases	—
(b) Other cases	1
<i>Other treatment or provision (including appliances, etc., provided following hospital treatment) :—</i>	
Appliances provided	65
Appliances altered	21
Special boots provided	15
Alterations to boots	179
Other forms of treatment provided	11

The diseases or defects found in children examined at the clinic for the first time during the year have been classified as follows :—

<i>Diseases or Defects.</i>	<i>Number.</i>
Defective posture	182
Scoliosis	13
Flat feet	35
Poliomyelitis	3
Spastic paralysis	2
Congenital malformation or deformity	5
Torticollis	2
Knock knee	12
Claw feet	10
Bow legs	2
Tuberculous disease	1
Other defects	48
Total	315

The following is a classification of the cases discharged during the year :—

<i>Reason.</i>	<i>Number.</i>
Cured	83
Improved	49
Unlikely to benefit further	19
Left the district	13
Failed to attend for treatment	71
Over school age	21
Other reasons (including trivial defects)	69
Total	325

Heart Disease and Rheumatism.—School children suffering from heart disease and rheumatism are kept under close supervision at special rheumatism clinics. Cases of acute rheumatism are admitted to the Lord Pontypridd Hospital (Dulwich House)—a hospital of 25 beds which is specially reserved for the purpose and which is under the control of the Health Committee of the City Council. Details of the work undertaken at the clinics and at the hospital are contained in the report on the general health service. The number of school children remaining under supervision at the end of the year was 1,687, an increase of 220 over the number at the end of the previous year.

Tuberculosis.—The department co-operates closely with the Tuberculosis Institute of the Welsh National Memorial Association, by which body the treatment of tuberculosis is undertaken, all cases of tuberculosis and suspected tuberculosis being referred to the Tuberculosis Physician for diagnosis and/or treatment.

Other Defects and Diseases.—Children found to be suffering from minor defects or diseases not already mentioned are referred for special examination at the school clinics, where parents receive advice as to the treatment required, and in some instances suitable remedies are provided at the clinics. Children suffering from defects or diseases for the treatment of which no special provision has been made at the clinics or elsewhere are visited by school nurses, who advise the parents as to appropriate means of obtaining treatment.

Radiography.—Radiography is undertaken by the department, and during the year 85 school children were referred from the clinics to be radiographed, the total number of radiograms taken being 139. Ninety-four parts of the body required X-ray examination in the 85 cases as follows :—

Teeth	....	....	....	....	....	15
Chest	....	....	....	....	....	3
Spine	....	....	....	....	....	32
Shoulder	....	....	....	....	....	1
Arm	....	....	....	....	....	3
Elbow	....	....	....	....	....	2
Wrist	....	....	....	....	....	2
Hand	....	....	....	....	....	7
Hip	....	....	....	....	....	14
Knee	....	....	....	....	....	3
Thigh	....	....	....	....	....	2
Leg	....	....	....	....	....	4
Foot	....	....	....	....	....	6
Total						94

VIII.—INFECTIOUS DISEASES.

Constant and special attention is paid to preventing the spread of both notifiable and non-notifiable infectious diseases amongst school children. As soon as notifiable diseases, such as scarlet fever and diphtheria, come to the knowledge of the department the homes of the patients are visited by an officer of the general health service section and arrangements are made for the isolation of the patients, either at the Isolation Hospital or in their own homes. Nearly all cases of diphtheria, however, are admitted to the Hospital. All children who have been in contact with cases of notifiable infectious diseases are excluded from school for the prescribed periods by means of exclusion certificates, copies of which are sent to the schools and to school attendance officers, re-admission certificates being also sent in due course. Active immunization of school children, especially of those in infants' schools, is undertaken as time and opportunity allow. Head teachers are supplied with tabular statements showing the period of exclusion from school of patients and contacts in all infectious diseases. An arrangement is also in operation whereby the names and addresses of school children who are absent from school on account of non-notifiable diseases, such as measles, chickenpox and whooping cough, are supplied on appropriate forms in order that they may be visited by officers of the department with a view to preventing the spread of infection as far as possible.

The numbers of school children notified to be suffering from various infectious diseases during the year were as follows :—

Scarlet fever	....	....	....	....	....	599
Diphtheria	....	....	....	....	....	367
Enteric fever	....	....	....	....	....	1
Pneumonia	....	....	....	....	....	21
Cerebro-spinal fever	....	....	....	....	....	1
Dysentery	....	....	....	....	....	6
Erysipelas	....	....	....	....	....	6
Tuberculosis—Respiratory	....	....	....	....	....	22
„ —Other forms	....	....	....	....	....	29

The following cases of non-notifiable infectious diseases were intimated by head teachers or school attendance officers, or were otherwise ascertained :—

Chickenpox	....	....	....	....	....	529
Measles	....	....	....	....	....	271
Rubella	....	....	....	....	....	3
Whooping cough	....	....	....	....	....	257
Mumps	....	....	....	....	....	6

Vaccinal State of School Children.—Of 10,311 elementary and high school children inspected at routine inspection during 1934, 5,426, or 52·6 per cent., were found to be vaccinated. During the ten years 1925-34, the proportion of children inspected who were found to have been vaccinated has declined from 63·0 per cent. to 52·6 per cent., as follows :—

<i>Year.</i>						<i>Percentage Vaccinated.</i>
1925	....	....	....	....	....	63·0
1926	....	....	....	....	....	61·6
1927	....	....	....	....	....	60·8
1928	....	....	....	....	....	60·9
1929	....	....	....	....	....	56·4
1930	....	....	....	....	....	57·4
1931	....	....	....	....	....	56·1
1932	....	....	....	....	....	58·1
1933	....	....	....	....	....	54·5
1934	....	....	....	....	....	52·6

IX.—OPEN-AIR EDUCATION.

At schools where facilities are suitable for the purpose, classes are held in the playgrounds during appropriate weather ; at several schools a special feature is made of these playground classes. Children from other schools are taken to the public parks for certain lessons during the summer. Excursions are sometimes arranged by schools to places of educational interest in various parts of the country. Educational visits are also made to local institutions and buildings.

X.—PHYSICAL TRAINING.

There is a whole-time female organiser of physical education, who is responsible for the organisation and supervision of physical training in girls' and infants' schools. Special attention is given to the arrangement of organised games, such as netball and rounders, the teaching of swimming and national and folk dancing. Courses of instruction in physical education for teachers of girls' and infants' schools are conducted annually by the organiser and generally are well attended.

Hitherto there has been no male organiser of physical training for boys' schools, but at all schools physical exercise lessons are given and head teachers may arrange for organised games for the older children to be held during school sessions. Arrangements are also made for the playing of football, cricket and baseball and for swimming. Many of the scholars take part in open-air league games and competitions. The Education Committee, however, have recently decided to appoint a male organiser of physical training and the appointment of a suitable candidate is now under consideration. It is hoped that this appointment will lead to the physical training of boys receiving greater attention than has hitherto been possible.

XI.—PROVISION OF MEALS.

There are 17 canteens in various parts of the city where dinners are supplied to necessitous school children. During the year the average daily number of children provided with dinners was 2,487. Specimen menus of the meals supplied were set out in the report for 1933.

Instead of breakfast, a daily ration of pasteurised milk is supplied in bottles at the schools. The average number of necessitous children provided with milk daily free of charge was 3,347.

In addition, arrangements have been made for children, whose parents are willing to bear the cost, to be supplied with milk at school, the average number of children who received milk daily under these arrangements during the whole year being 5,595.

Under the scheme of the Milk Marketing Board, which came into operation on 1st October, 1934, whereby milk became available at one shilling per gallon, enabling it to be supplied to children at $\frac{1}{2}$ d. instead of 1d. for one-third of a pint, the demand under the voluntary arrangement increased enormously. During January to September the average number of children receiving milk under this arrangement was 2,633, but during October to December the average number increased to 13,497.

The daily ration of milk supplied free is half-a-pint for children over 8 years of age and one-third of a pint for younger children. Under the voluntary arrangement one-third of a pint is supplied to children of all ages.

The beneficial effect of the milk provided for necessitous children is difficult to assess, as the majority of those who receive it also receive free dinners, and the benefits of the milk and the nutritious meals provided cannot very well be considered as separate entities. A small proportion of children, however, take advantage only of the provision of free milk. The unanimous opinion of those who have had long experience among children is that the milk is definitely beneficial and that in many instances the improvement in the nutrition of the children to whom it is given is very decided. Some children do not gain benefit from the ration of milk on account of the fact they they lose their appetite for the mid-day meal after consuming it. This is a factor that is mentioned by many head teachers, and it would appear that a very definite though small proportion of children is affected in this way.

XII.—CO-OPERATION OF PARENTS, TEACHERS, SCHOOL ATTENDANCE OFFICERS AND VOLUNTARY BODIES.

Parents.—Parents take a great interest in the facilities provided for medical inspection and treatment, and, generally, they follow the advice given as to the care of their children's health. They are invited by notices to attend the inspections that take place at school and many of them accompany their children to the school clinics.

Teachers.—The teachers co-operate with the department in all the work that is undertaken, and the help they render in preparing the medical and dental inspection schedules and in marshalling the children for inspection is of very great assistance. Head teachers are supplied with lists of children who are recommended for treatment and co-operate in ensuring that it is obtained. They also co-operate in the arrangement for notifying the department of the names and addresses of children who require special attention and of children who are absent from school by reason of non-notifiable infectious diseases.

School Attendance Officers.—There is complete co-operation on the part of school attendance officers, whose very willing assistance is invaluable to the school medical service staff. Many children requiring attention come to the knowledge of the department through them, and they render useful service in dealing with negligent parents whose children fail to keep appointments at the clinics.

Voluntary Bodies.—As usual, voluntary bodies concerned with the welfare of school children have co-operated closely in the work. The arrangement whereby the Queen's Institute of District Nursing carries out the treatment of minor ailments at the homes of the children, which has been in force for many years, continues to work smoothly, and full value is obtained for the annual grant of £100 which is paid to the Institute for its services. Details of the work undertaken by the Institute during 1934 are given on page 142. Fortunately, it is not often that the services of inspectors of the National Society for the Prevention of Cruelty to Children have to be sought, but they always deal promptly with cases that are referred to them. Senior school children—both boys and girls—who are provided with holidays at seaside homes by two voluntary bodies are selected from amongst delicate children who are known to the department.

XIII.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

Blind, deaf, defective and epileptic children come to the knowledge of the department through various channels, but they are ascertained mainly through routine medical inspection at schools and through notification by head teachers and school attendance officers. The numbers of such children who are known to the department are given in detail in the return on pages 157 to 159.

Mentally Defective Children.—It will be seen from the return referred to that the number of mentally defective children, who were not transferable to the Mental Deficiency Authority, was 127, of whom 113 were attending the special day school and 2 were in residential institutions. The remaining 12 children are supervised at home by officers of the department. There were also 7 children who, in addition to being mentally defective, suffered from serious physical defects; 2 of these were also in attendance at the special day school.

During the year, 61 children who were suspected to be mentally defective were specially examined or re-examined. Twenty-six of them were certified to be feeble-minded and suitable for education in a special school, 7 were transferred to the care of the Mental Deficiency Authority, 18 were found to be dull and/or backward, 3 to be backward and unstable, 3 to be unstable only and 4 were found to be mentally normal.

Altogether, 35 children were notified to the Mental Deficiency Authority during 1934, particulars of whom are classified in the following table:—

Diagnosis	Boys	Girls	Totals
1. (i) Children incapable of receiving benefit or further benefit from instruction in a Special School:—			
(a) Idiots	1	....	1
(b) Imbeciles .....	....	1	1
(c) Others	9	7	16
(ii) Children unable to be instructed in a Special School without detriment to the interests of other children:—			
(a) Moral Defectives .....	....	....	....
(b) Others .....	....	....	....
2. Feeble-minded children notified on leaving a Special School on or before attaining the age of 16	9	8	17
3. Feeble-minded children notified under Article 3 of the 1928 Regulations, <i>i.e.</i> , "special circumstances" cases .....	....	....	....
4. Children who in addition to being mentally defective were blind or deaf .....	....	....	....
Totals	19	16	35

Mentally Retarded Children.—A special class for mentally retarded children, known as the "delta" class, is held at one of the elementary schools. Children, regarding whose mental condition there is some doubt, are admitted to the class from the elementary schools. They are examined periodically by a medical officer of the department to decide as to the form of education for which they are most suitable. Children who make sufficient progress are allowed to return to ordinary elementary schools, while others are found to be feeble-minded and admitted to the special day school. At the end of the year 19 children (15 boys and 4 girls) were in attendance at the class.

Special Schools.—There are special day schools for mentally defective, blind (including partially blind), deaf and physically defective children, the numbers in attendance being given in the return on pages 157 to 159. The children attending these schools are regularly inspected and closely supervised by medical officers of the department.

Greenhill Open-Air School.—The number of physically defective children on the register at the end of 1934 was 136, and the average attendance during the year—excluding August—was 115. One-hundred and ten children (60 boys and 50 girls) were admitted to the school, and 86 (48 boys and 38 girls) were discharged. The following are the principal diseases or defects found in the children admitted during the year :—

<i>Diseases or Defects.</i>	<i>Number.</i>
Anaemia	12
Malnutrition	35
Anaemia and malnutrition	28
Cervical adenitis	3
Quiescent tuberculosis (non-pulmonary)	3
Post-rheumatic debility	6
Post-pneumonic debility	20
Post-influenzal debility	3
Total	110

Twenty-five of these children had previously shown clinical signs suggestive of tuberculosis, but at the time of admission none of them suffered from active tuberculosis. There was a history of tuberculosis in the parents or brothers and/or sisters in 15 of the children admitted.

The following table shows the average increases in weight and height of the 86 children who were discharged from the school during 1934 :—

Average Period in School (Months)	Number of Children in Group	Average Age on Discharge (Years)	Average gain in Weight (Pounds)	Average gain in Height (Inches)
3	5	10.24	0.95	0.10
6	14	10.61	2.50	0.91
9	2	11.57	5.62	1.75
12	13	11.52	7.55	1.59
15	12	10.04	6.95	2.17
18	12	10.98	8.41	2.31
21	7	9.19	8.42	2.32
24	14	10.11	11.10	4.15
27	2	9.90	10.37	5.25
30	3	9.37	14.41	4.00
36	2	10.25	11.75	5.37

Sixty-six children were assessed scholastically and intellectually during attendance at the school, the results being given in the following table :—

Average Period in School (Months)	Number of Children in Group	Average Age on Assessment (Years)	Average Scholastic Age (Years)	Average Mental Age (Years)	Average Intelligence Quotient (Percentage)
3	2	8.41	7.79	8.38	99.99
6	7	10.79	9.40	10.07	92.71
9	1	9.91	7.83	8.50	85.00
12	10	11.23	9.44	10.01	88.45
15	9	9.21	8.79	8.55	93.34
18	10	9.72	8.05	9.37	97.70
21	6	8.16	6.99	7.54	92.93
24	14	8.72	7.02	7.69	91.15
27	2	7.83	3.50	5.75	71.60
30	3	7.28	4.64	6.44	90.63
36	2	7.50	7.37	6.75	91.15

XIV.—FULL-TIME COURSES OF HIGHER EDUCATION FOR BLIND, DEAF, DEFECTIVE AND EPILEPTIC STUDENTS.

No special courses of higher education for blind, deaf, defective or epileptic students have been arranged, but suitable blind students receive special training at the Cardiff Institute for the Blind at the cost of the Education Authority. Males are taught to make baskets, mats, cork ship fenders, brushes and coal bags, and females are taught knitting, weaving, chair-caning and light basket-making. At the end of the year there were 12 blind persons (11 males and 1 female) for whose training the Education Authority had accepted chargeability.

XV.—NURSERY SCHOOLS.

There is no nursery school in Cardiff, but the question of providing one is at present being considered by the Education Authority.

XVI.—SECONDARY SCHOOLS AND OTHER INSTITUTIONS OF HIGHER EDUCATION.

Eight high schools have been provided by the Education Authority (4 for boys and 4 for girls). All the facilities provided for the medical inspection and treatment of elementary school children are available for the pupils of these schools. One secondary school for boys and 2 for girls are aided by the Authority; the managers of the school for boys and one of the schools for girls have requested the Authority to make arrangements for the medical inspection of the pupils in attendance. High and secondary school pupils are medically inspected on entering school and prior to leaving school and special inspections and treatment are carried out at the school clinics.

Particulars of the number of pupils inspected, the findings of inspection and a record of the treatment undertaken are contained in the statistical tables on pages 163 to 167.

XVII.—PARENTS' PAYMENTS.

Parents of school children who receive treatment at the school clinics or at hospital are required to pay for certain forms of treatment according to an approved scale of family income, but children belonging to families whose incomes are below the scale are treated free of charge. The forms of treatment for which charges are made are nose and throat operations, indoor orthopaedic treatment and dental treatment. Charges are also made for appliances supplied to crippled children and for spectacles.

Application forms have to be filled in and signed by parents, who, unless willing to pay the full cost, are required to supply complete particulars of their incomes from all sources. The fees for dental treatment have to be paid at the time of treatment and the cost of spectacles before they are supplied, but all other money is collected by collectors employed by the City Council after accounts have been rendered.

XVIII.—HEALTH EDUCATION.

For many years several thousands of copies of a popular monthly magazine ("*Better Health*") were circulated amongst teachers and senior scholars, but, unfortunately, it became necessary owing to financial difficulties, to cease publication of the magazine in Cardiff in September, 1934. However, every opportunity is taken to create and maintain the interest of teachers and children in all matters appertaining to health—both personal and communal. During the year copies of the latest edition of the Board of Education Handbook of Suggestions on Health Education were supplied to all head teachers of elementary schools and liberal supplies of literature for boys and girls (including infants) dealing with health subjects were sent to schools. The cost of this literature was borne by the Health Committee as part of their expenses in connection with health propaganda. Every possible opportunity is taken by medical officers and school nurses to disseminate knowledge amongst the parents of children with whom they come into contact on the means of protecting the health of their children, and school dentists give talks on the care of teeth to children at school at the time of routine dental inspection.

XIX.—SPECIAL INQUIRIES.

It is regretted that no special inquiries have been conducted by members of the school medical staff regarding the work of the special services during the year, but it should be mentioned that the main reason for this is that all the time of the medical officers is fully occupied with the routine work that has to be done.

XX.—MISCELLANEOUS.

Medical Examination of Teachers.—The number of newly appointed and other teachers examined by the medical staff was 5 (2 males and 3 females).

Juvenile Employment.—Six children (5 boys and one girl) were medically examined on the request of the Juvenile Employment (Education) Officer as to their suitability and fitness for employment and 83 children (16 boys and 67 girls) were examined in connection with the issue of entertainment licences.

Junior Instruction Centres.—There are two Junior Instruction Centres (one for males and one for females) and arrangements were completed near the end of the year for the inspection and treatment of the pupils in attendance who are not entitled to benefit or treatment under the National Health Insurance Acts to be undertaken by the medical and dental staffs of the department.

The scheme, which is to be experimental for one year, is as follows :—

(1) That periodical visits to the centres be made at least once a quarter by two medical officers (male and female) who will each spend a day at the centre.

(2) That for a period prior to the visits, the staff at the centres select pupils who suffer from certain defects—defective vision, defective teeth, anaemia, etc., or appear to be ailing in other respects—so that they may be dealt with during the visits of the medical officers.

(3) That the necessary particulars of the pupils to be presented for inspection be sent to the school medical department some time prior to the visits so that the medical history of the pupils may be traced.

(4) That the medical officers at their visits, in addition to inspecting pupils selected by the teaching staff, inspect other pupils who appear to them to require attention.

(5) That between the visits of the medical officers individual cases that appear to the teaching staff to require medical attention be referred to the school medical department forthwith, in order that arrangements may be made for their examination and treatment at the appropriate clinic.

Classes for Speech Training.—Additional classes for children suffering from speech defects were arranged during 1934, and the Instructress is now employed in a whole-time capacity. Separate classes are held for boys and girls, and elementary and high school children are also dealt with separately.

The classes opened at the beginning of the year with the names of 50 children on the registers. The number admitted during the year was 59, the total number of individual cases dealt with being 109. Forty-four children were discharged, 1 of them on account of irregular attendance, 2 having left school and 6 for other reasons. The classification on discharge of the remaining 35 cases was as follows :—

Provisionally cured	....	....	....	9
Very much improved	....	....	....	7
Much improved	....	....	....	3
Improved	....	....	....	13
Unsuitable for treatment	....	....	....	2
Unlikely to benefit further	....	....	....	1
				—
Total	....	....	....	35
				—

At the close of each term, head teachers were asked to supply reports on the progress, according to their opinion, made by children attending the classes. The following is a summary of the reports received :—

			1st Term.	2nd Term.	3rd Term.
Cured	....	....	—	1	—
Much improved	....	....	10	10	10
Improved	....	....	37	41	52
Not improved	....	....	15	8	14
No definite report	....	....	1	3	7
			—	—	—
Totals	....	....	63	63	83
			—	—	—

Head teachers also supplied reports at the end of the year on 47 scholars who had passed through the special classes and who were still attending school. These reports are summarised as follows :—

Cured	....	....	....	....	5
Much improved	....	....	....	....	11
Improved	....	....	....	....	17
Not improved	....	....	....	....	11
No definite report	....	....	....	....	3
					—
Total	....	....	....	....	47
					—

The Instructress continued to visit the schools and homes of children attending the special classes and to make after-care visits to children who had left school. She made 22 visits to schools, and 173 visits to the homes of children in attendance and of those who had attended the classes but had since left school. The condition of the speech of 63 of the cases to whom after-care visits were made is summarised as follows :—

Cured	....	....	....	....	....	13
Progressed or improved	....	....	....	....	....	31
Improvement maintained	....	....	....	....	....	11
Variable	....	....	....	....	....	3
No improvement	....	....	....	....	....	2
Relapsed	....	....	....	....	....	3
						—
Total					....	63
						—

XXI.—STATISTICAL TABLES.

ELEMENTARY SCHOOLS.

TABLE I.

RETURN OF MEDICAL INSPECTIONS.

A.—ROUTINE MEDICAL INSPECTIONS.

Number of Inspections in the prescribed Groups :—

Entrants	....	....	....	....	3,189
Second Age Group	....	....	....	....	2,619
Third Age Group	....	....	....	....	3,079
					—
Total				....	8,887
					—

Number of other Routine Inspections

....	182
------	------	-----

B.—OTHER INSPECTIONS.

Number of Special Inspections	....	....	6,035
Number of Re-inspections	....	....	6,754
			—
Total		....	12,789
			—

ELEMENTARY SCHOOLS.

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION.

DEFECT OR DISEASE				ROUTINE INSPECTIONS		SPECIAL INSPECTIONS	
				No. of Defects		No. of Defects	
				Requiring Treatment	Requiring to be kept under observation, but <i>not</i> requiring Treatment	Requiring Treatment	Requiring to be kept under observation, but <i>not</i> requiring Treatment
Malnutrition	....	....	....	62	65	50	9
Skin	Ringworm :	....	....	....	....	....	....
	Scalp	....	....	2	....	15	....
	Body	....	....	9	....	113	....
	Scabies	....	....	27	....	192	....
	Impetigo	....	....	29	....	813	....
Eye	Other Diseases (Non-Tuberculous)	....	....	42	2	291	10
	Blepharitis	....	....	41	1	35	....
	Conjunctivitis	....	....	8	....	15	....
	Keratitis	....	....	1	....	7	....
	Corneal Opacities	....	....	7	1	7	....
Ear	Defective Vision (excluding Squint)	....	....	532	109	149	10
	Squint	....	....	65	14	22	1
	Other Conditions	....	....	28	12	59	3
Nose and Throat	Defective Hearing	....	....	73	8	65	4
	Otitis Media	....	....	102	2	99	2
	Other Ear Diseases	....	....	31	8	57	6
Enlarged Cervical Glands (Non-Tuberculous)	Chronic Tonsillitis only	....	....	260	227	149	55
	Adenoids only	....	....	23	4	19	4
	Chronic Tonsillitis and Adenoids	....	....	126	17	50	13
Defective Speech	Other Conditions	....	....	54	15	155	32
	Heart Disease :—	....	....	15	16	57	12
	Organic	....	....	33	12	17	5
Heart and Circulation	Functional	....	....	26	95	41	83
	Anaemia	....	....	22	177	14	55
	Bronchitis	....	....	45	15	111	7
Lungs	Other Non-Tuberculous Diseases	....	....	57	46	56	24
	Pulmonary :	....	....	50	114	114	107
	Definite	....	....	....	....	1	....
Tuberculosis	Suspected	....	....	1	8	13	16
	Non-Pulmonary :	....	....	....	....	....	....
	Glands	....	....	1	....	10	3
Nervous System	Bones and Joints	....	....	....	2	9	1
	Skin	....	....	....	....	....	....
	Other Forms	....	....	....	....	....	....
Deformities	Epilepsy	....	....	6	5	6	9
	Chorea	....	....	13	12	39	17
	Other Conditions	....	....	26	25	59	38
Other Defects and Diseases (excluding Uncleanliness and Dental Diseases)	Rickets	....	....	11	2	....	....
	Spinal Curvature	....	....	14	3	2	1
	Other Forms	....	....	61	17	35	7
Total	....	....	....	2,262	1,283	3,749	865

B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

GROUP	NUMBER OF CHILDREN		Percentage of Children found to require Treatment
	Inspected	Found to require Treatment	
PRESCRIBED GROUPS :—			
Entrants	3,189	598	18·7
Second Age Group ..	2,619	556	21·3
Third Age Group ..	3,079	722	23·4
Total (Prescribed Groups)	8,887	1,876	21·1
Other Routine Inspections	182	23	12·6
Grand Total	9,069	1,899	20·9

TABLE III.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

(NO CHILD ENTERED UNDER MORE THAN ONE HEADING).

CHILDREN SUFFERING FROM MULTIPLE DEFECTS.

Mentally defective and crippled	4*
Mentally defective and blind ...	1†
Mentally defective and epileptic..	2‡
Total	7

BLIND CHILDREN.

At Certified Schools for the Blind	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
11	11

PARTIALLY BLIND CHILDREN.

At Certified Schools for the Blind	At Certified Schools for the Partially Blind	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
....	40	11	....	....	51

* Three attend the Special Day School for Mentally Defective Children ; one ineducable and does not attend school.

† On waiting list for residential institution.

‡ One on waiting list for residential institution ; the other, who is under treatment at home, does not attend school.

DEAF CHILDREN.

At Certified Schools for the Deaf	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
21	2*	....	....	23

PARTIALLY DEAF CHILDREN.

At Certified Schools for the Deaf	At Certified Schools for the Partially Deaf	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
...	8	....	....	8

MENTALLY DEFECTIVE CHILDREN.
FEEBLEMINDED CHILDREN.

At Certified Schools for Mentally Defective Children	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
113	2	12	127

EPILEPTIC CHILDREN.
CHILDREN SUFFERING FROM SEVERE EPILEPSY.

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
2	2	...	1	5

PHYSICALLY DEFECTIVE CHILDREN.

A.—TUBERCULOUS CHILDREN.

I.—CHILDREN SUFFERING FROM PULMONARY TUBERCULOSIS.
(Including pleura and intra-thoracic glands).

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
3	..	3	11	17

II.—CHILDREN SUFFERING FROM NON-PULMONARY TUBERCULOSIS.
(Tuberculosis of all sites other than those shown in I above).

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
7	6	4	17	34

* Awaiting admission to Certified School for the Deaf.

B.—DELICATE CHILDREN.

(Children—except those included in other groups—whose general health renders it desirable that they should be specially selected for admission to an open-air school).

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
136	118	....	....	254

C.—CRIPPLED CHILDREN.

(Children—other than those diagnosed as tuberculous and in need of treatment for that disease—who are suffering from a degree of crippling sufficiently severe to interfere materially with a child's normal mode of life).

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
2	60	....	14	76

D.—CHILDREN WITH HEART DISEASE.

(Children whose defect is so severe as to necessitate the provision of educational facilities other than those of the Public Elementary School).

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
25	52*	2	22	101

* Including children with major heart manifestations who are under supervision at Rheumatism Clinics and children with congenital heart disease.

ELEMENTARY SCHOOLS.

TABLE IV.

RETURN OF DEFECTS TREATED.

TREATMENT TABLE.

GROUP I.—Minor Ailments (excluding Uncleanliness, for which see Group VI).

DEFECT OR DISEASE	Number of Defects treated or under treatment during the year		
	Under the Authority's Scheme	Otherwise	Total
SKIN :—			
Ringworm—Scalp—			
(i) X-ray Treatment	3	...	3
(ii) Other	15	1	16
Ringworm—Body	100	7	107
Scabies	170	6	176
Impetigo	858	18	876
Other Skin Disease	228	27	255
MINOR EYE DEFECTS :—			
(External and other, but excluding cases falling in Group II)	32	8	40
MINOR EAR DEFECTS	538	...	538
MISCELLANEOUS (e.g., minor injuries, bruises, sores, chilblains, etc.)	103	80	183
Total	2,047	147	2,194

GROUP II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I).

DEFECT OR DISEASE	Number of Defects dealt with		
	Under the Authority's Scheme	Otherwise	Total
Errors of Refraction (including Squint)	1,544	6	1,550
Other Defect or Disease of the Eyes (excluding those recorded in Group I)	242	...	242
Total	1,786	6	1,792

DEFECT OF DISEASE	Number of Children for whom Spectacles were			
	Prescribed		Obtained	
	Under the Authority's Scheme	Otherwise	Under the Authority's Scheme	Otherwise
Errors of Refraction (including Squint)	1,433	5	1,373*	5

* Including 512 free of charge.

GROUP III.—Treatment of Defects of Nose and Throat.

	Number of Defects			
	Tonsils only	Adenoids only	Tonsils and Adenoids	Other Defects
Received Operative Treatment—				
Under the Authority's Scheme, in				
Clinic or Hospital	73	3	212	....
By Private Practitioner or Hospital,				
apart from the Authority's Scheme	....	....	4	
Total	73	3	216	....
Received other forms of treatment	396*			
Total number treated	688			

* Including 17 also treated by operation.

GROUP IV.—Orthopaedic and Postural Defects.

	Under the Authority's Scheme			Otherwise			Total number treated
	Residential treatment with education	Residential treatment without education	Non-residential treatment at an orthopaedic clinic	Residential treatment with education	Residential treatment without education	Non-residential treatment at an orthopaedic clinic	
Number of children treated	33	2	481	....	....	....	516

GROUP V.—Dental Defects.

(1) Number of Children who were :—

(i) Inspected by the Dentists :—

Routine Age Groups	<i>Aged</i>			
	3	....	19	
	4	....	463	
	5	....	2,028	
	6	....	2,211	
	7	....	2,702	
	8	....	2,825	
	9	....	2,960	Total 25,066
	10	....	2,917	
	11	....	2,796	
	12	....	2,496	
	13	....	2,329	
	14	....	1,275	
	15	....	27	
	16	....	18	

Specials 861

Grand Total 25,927

(ii) Found to require treatment 18,959
 (iii) Actually treated 7,848*

(2) Half-days devoted to :—

Inspection	....	....	....	....	128
Treatment	....	....	....	....	1,599
Total	....	....	....	....	1,727

(3) Attendances made by children for treatment 13,925

(4) Fillings :—

Permanent teeth	....	....	....	....	5,465
Temporary teeth	....	....	....	....	223
Total	....	....	....	....	5,688

(5) Extractions :—

Permanent teeth	....	....	....	....	4,042
Temporary teeth	....	....	....	....	16,159
Total	....	....	....	....	20,201

(6) Administrations of general anaesthetics for extractions 7,463

(7) Other operations :—

Permanent teeth	....	....	....	....	1,338
Temporary teeth	....	....	....	....	17
Total	....	....	....	....	1,355

*Including 3,239 who had received treatment previously.

GROUP VI.—Uncleanliness and Verminous Conditions.

(i)	Average number of visits per school made during the year by the school nurses	....	....	3.0
(ii)	Total number of examinations of children in the schools by school nurses	....	....	47,510
(iii)	Number of individual children found unclean	....		2,255
(iv)	Number of children cleansed under arrangements made by the Local Education Authority	....		472*
(v)	Number of cases in which legal proceedings were taken :—			
	(a) Under the Education Act, 1921	....		—
	(b) Under School Attendance Byelaws	....		—

*Including cases actually cleansed by the school nurses and cases cleansed by parents on advice given by the nurses.

SECONDARY AND HIGH SCHOOLS.

TABLE I.

RETURN OF MEDICAL INSPECTIONS.

A.—ROUTINE MEDICAL INSPECTIONS.

Number of Routine Inspections	1,424
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B.—OTHER INSPECTIONS.

Number of Special Inspections	197
Number of Re-inspections....	343
Total	....	....	....	540

SECONDARY AND HIGH SCHOOLS.

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION.

DEFECT OR DISEASE		ROUTINE INSPECTIONS		SPECIAL INSPECTIONS	
		No. of Defects		No. of Defects	
		Requiring Treatment	Requiring to be kept under observation, but <i>not</i> requiring Treatment	Requiring Treatment	Requiring to be kept under observation, but <i>not</i> requiring Treatment
Malnutrition		....	....	....	....
Skin	Ringworm :	....	....	....	....
	Scalp	....	....	....	....
	Body	....	....	....	....
	Scabies	1	....	1	....
	Impetigo	1	....	3	....
Eye	Other Diseases (Non-Tuberculous)	4	....	7	....
	Blepharitis	2	....	....	....
	Conjunctivitis	....	....	....	....
	Keratitis	....	....	....	....
	Corneal Opacities	....	....	....	....
Ear	Defective Vision (excluding Squint)	146	14	12	....
	Squint	2	....	....	....
	Other Conditions	....	....	1	....
Nose and Throat	Defective Hearing	5	....	....	....
	Otitis Media	3	1	1	....
	Other Ear Diseases	....	....	1	....
Enlarged Cervical Glands (Non-Tuberculous)	Chronic Tonsillitis only	14	7	2	1
	Adenoids only	....	....	3	....
	Chronic Tonsillitis and Adenoids	....	2	....	....
Defective Speech	Other Conditions	2	1	8	2
	Heart Disease :	1	....	1	....
	Organic	2	....	....	....
Heart and Circulation	Functional	3	7	3	4
	Anaemia	2	5	2	1
	Bronchitis	7	....	....	....
Lungs	Other Non-Tuberculous Diseases	....	1	....	....
	Pulmonary :	....	5	7	3
	Definite	....	....	....	....
Tuberculosis	Suspected	....	1	....	....
	Non-Pulmonary :	....	....	....	....
	Glands	....	....	....	....
	Bones and Joints	....	....	....	....
	Skin	....	....	....	....
Nervous System	Other Forms	....	....	....	....
	Epilepsy	....	....	....	....
	Chorea	....	....	....	....
Deformities	Other Conditions	....	....	2	2
	Rickets	....	....	....	....
	Spinal Curvature	3	....	2	....
Other Defects and Diseases (excluding Uncleanliness and Dental Diseases)	Other Forms	3	2	6	....
		17	11	30	17
	
Total		219	57	92	30

B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION
TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES)

GROUP	NUMBER OF CHILDREN		Percentage of Children found to require Treatment
	Inspected	Found to require Treatment	
Routine Inspections 	1,424	196	13.7

SECONDARY AND HIGH SCHOOLS.

TABLE IV.

RETURN OF DEFECTS TREATED.

TREATMENT TABLE.

GROUP I.—Minor Ailments (excluding Uncleanliness).

DEFECT OR DISEASE	Number of Defects treated or under treatment during the year		
	Under the Authority's Scheme	Otherwise	Total
SKIN :—			
Ringworm—Scalp—			
(i) X-ray Treatment .... .... ....	....	....	....
(ii) Other .... .... ....	....	....	....
Ringworm—Body .... .... ....	....	....	....
Scabies .... .... ....	....	....	....
Impetigo 	2	....	2
Other Skin Disease 	3	....	3
MINOR EYE DEFECTS :—			
(External and other, but excluding cases falling in Group II) .... .... ....	....	....	....
MINOR EAR DEFECTS 	9	....	9
MISCELLANEOUS (<i>e.g.</i> , minor injuries, bruises, sores, chilblains, etc.)....	....	....	....
Total 	14	....	14

GROUP II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I).

DEFECT OR DISEASE	Number of Defects dealt with		
	Under the Authority's Scheme	Otherwise	Total
Errors of Refraction (including Squint)	136	7	143
Other Defect or Disease of the Eyes (excluding those recorded in Group I)	6	....	6
Total	142	7	149

DEFECT OR DISEASE	Number of Children for whom Spectacles were			
	Prescribed		Obtained	
	Under the Authority's Scheme	Otherwise	Under the Authority's Scheme	Otherwise
Errors of Refraction (including Squint)	132	6	112*	6

* Including 6 free of charge.

GROUP III.—Treatment of Defects of Nose and Throat.

	Number of Defects			
	Tonsils only	Adenoids only	Tonsils and Adenoids	Other Defects
Received Operative Treatment—				
Under the Authority's Scheme, in Clinic or Hospital	5	....	6	....
By Private Practitioner or Hospital, apart from the Authority's Scheme .....	....	....	....	....
Total	5	..	6	....
Received other forms of treatment ...	22			
Total number treated	33			

GROUP V.—*Dental Defects.*

(1) Number of Children who were :—						
(i) Inspected by the Dentists :						
Specials	....	....	....	....	....	804
(ii) Found to require treatment	....	....	....	....	....	796
(iii) Actually treated	....	....	....	....	....	843*
(2) Half-days devoted to :—						
Inspection	....	....	....	....	....	†
Treatment	....	....	....	....	....	†
Total					....	†
(3) Attendances made by children for treatment					....	2,432
(4) Fillings :—						
Permanent teeth	....	....	....	....	....	1,682
Temporary teeth	....	....	....	....	....	—
Total					....	1,682
(5) Extractions :—						
Permanent teeth	....	....	....	....	....	680
Temporary teeth	....	....	....	....	....	168
Total					....	848
(6) Administrations of general anaesthetics for extractions					....	467
(7) Other operations :—						
Permanent teeth	....	....	....	....	....	729
Temporary teeth	....	....	....	....	....	—
Total					....	729

* Including 572 who had received treatment previously.

† Special sessions are not devoted to inspection and treatment of secondary and high school children ; the numbers of sessions devoted to inspection and treatment of all children are shown on page 162.

MENTAL DEFICIENCY SERVICE.

The mentally defective persons under the care of the Mental Deficiency Committee are classified according to sex, age and form of mental defect in the tables given below. It will be seen on reference to Table III that the total number of ascertained defectives for the care of whom the Committee were responsible at the end of 1934 was 568—an increase of 47 over the number at the end of the previous year. Of the total number of cases, 211 were in institutions or under statutory guardianship, the institutions in which they were placed being shown in Table VII. The number of ascertained cases remaining at home was 352, of whom 240 were under statutory supervision and 112 under voluntary supervision; 5 remained to be appropriately dealt with. In addition, there were 86 cases in institutions under lunacy orders and 13 cases in poor law institutions but not under orders who would be dealt with more appropriately under the Mental Deficiency Acts.

TABLE I.

SUMMARY OF THE YEAR'S WORK.

(1) Cases examined for the first time:—

					<i>Males.</i>		<i>Females.</i>		<i>Totals.</i>
Idiots	....	....	....	....	2	....	—	....	2
Imbeciles	....	....	....	....	2	....	1	....	3
Feeble-minded	....	....	....	....	27	....	23	....	50
Not mentally defective	....	....	....	....	4	....	8	....	12
Unclassified	....	....	....	....	1	....	—	....	1
Totals				....	36	....	32	....	68

(2) Re-examinations 52 58 110

(3) Removed from list of ascertained cases under supervision at home—

(i) Removed to Institutions at instance of Local Authority—

(a) Obligatory	....	....	....	....	6	....	8	....	14
(b) Permissive	....	....	....	....	—	....	—	....	—

(ii) Removed to Institutions at instance of Public Assistance Committee—

(a) Under Lunacy Orders	....	....	....	....	—	....	—	....	—
(b) Other cases	....	....	....	....	—	....	3	....	3

(iii) Removed to Mental Hospitals 1 — 1

(iv) Deceased 2 2 4

(v) Left Cardiff — 2 2

Totals 9 15 .. 24

Table I continued—Summary of the Year's Work.

	Males.	Females.	Totals.
(4) Removed to Institutions (not previously under supervision at home)	3	5	8
(5) Total number removed to Institutions or placed under Guardianship at the instance of Local Authority	9	13	22
(6) Transferred from one Institution to another	13	3	16
(7) Institution cases that ceased to be chargeable to the Local Authority—			
(i) Deceased	2	1	3
(ii) On licence	3	2	5
(iii) Transferred to Mental Hospitals	2	1	3
Totals	7	4	11
(8) Instances in which licence from Institutions or Guardianship was granted	3	4	7
(9) Instances in which cases on licence were returned to Guardianship or Institutions	1	2	3
(10) Visits paid by Visiting Officer			1,889

TABLE II.

SOURCES OF ASCERTAINMENT OF CASES EXAMINED FOR FIRST TIME.

Source of Ascertainment	Idiots	Imbeciles	Feeble-minded	Not Mentally Defective	Unclassified	Totals
Local Education Authority ..	1	1	34	....	....	36
Public Assistance Department ..	....	....	8	10	....	18
Police ..	....	....	....	1	....	1
Mental Hospital ..	....	....	1	....	....	1
Cardiff Royal Infirmary ..	....	....	3	....	....	3 ^a
Parents, Guardians or Relatives ..	....	....	3	....	....	3
Officers of Public Health Department ..	....	2	....	1	1	4
Other Local Authorities ..	....	....	2	....	....	2
Totals	1	3	51	12	1	68

TABLE III.

POSITION AT 31ST DECEMBER, 1934.

			<i>Males.</i>		<i>Females.</i>		<i>Totals.</i>
(1)	Obligatory Cases :—						
	(a) In Institutions	....	98	....	82	....	180*
	(b) Under Guardianship	....	3	....	4	....	7
	(c) On Licence from Institution	....	8	....	4	....	12
	(d) On Licence from Guardianship	....	—	....	—	....	—
(2)	In "places of safety"	....	—	....	—	....	—
(3)	Cases in Institutions in regard to whom the Local Authority contributes under permissive powers	....	5	....	6	....	11
(4)	Cases removed by parents or guardians in regard to whom the Local Authority does not contribute :—						
	(a) In Institutions	....	1	....	—	....	1
	(b) Under Guardianship	....	—	....	—	....	—
	Totals	....	115	....	96	....	211
(5)	Cases in Institutions under Lunacy Orders ascertained to be mentally defective :—						
	(a) Ely Lodge	....	35	....	38	....	73
	(b) Mental Hospitals	....	6	....	7	....	13
	Totals	....	41	....	45	....	86
(6)	Cases at home—ascertained to be defective :—						
	(a) Under Statutory Supervision	....	133	....	107	....	240
	(b) Under Voluntary Supervision	....	47	....	65	....	112
	Totals	....	180	....	172	....	352
(7)	Attending Occupation Centre—included in (6) :—						
	(a) Under Statutory Supervision	....	17	....	11	....	28
	(b) Under Voluntary Supervision	....	—	....	—	....	—
	Totals	....	17	....	11	....	28
(8)	Attending Training Centre :—						
	(a) Under Statutory Supervision—included in (6)	....	15	....	14	....	29
	(b) Under Voluntary Supervision—included in (6)	....	1	....	1	....	2
	(c) On Licence from Institution—included in (1)	....	1	....	—	....	1
	(d) Under Guardianship—included in (1)	....	1	....	1	....	2
	Totals	....	18	....	16	....	34

*Including 14 cases (6 males and 8 females) maintained by the Board of Control.

Table III continued—Position at 31st December, 1934.

(9) "Subject to be dealt with" but action not yet

taken :—

	Males.	Females.	Totals.
(a) Notified by Education Authority	3	2	5
(b) Otherwise ascertained	—	—	—
(c) In Poor Law Institutions	3	10	13
Totals	6	12	18

(10) Under consideration but not ascertained to be defective

4 1 5

TABLE IV.

CLASSIFICATION OF KNOWN CASES.

	In Institutions or under Guardianship (including cases on licence, etc.)			Under Supervision at Home		
	Males	Females	Totals	Males	Females	Totals
Idiots	13	11	24	11	2	13
Imbeciles	43	24	67	58	59	117
Moral Defectives	1	1	2	—	1	1
Feeble-minded	56	59	115	110	110	220
Post-encephalitic Deterioration	1	1	2	1	1	2
Unclassified or not examined	1	—	1	3	1	4
Totals	115	96	211	183	174	357

TABLE V.

AGES OF CASES IN INSTITUTIONS OR UNDER GUARDIANSHIP.
(INCLUDING CASES ON LICENCE, ETC.)

Ages— Years	Idiots		Imbeciles		Moral Defectives		Feeble-minded		Post-encephalitic Deterioration		Unclassified		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
6	1	—	—	—	—	—	—	—	—	—	—	—	1
7	—	—	1	—	—	—	—	—	—	—	—	—	1
8	1	—	1	—	—	—	—	—	—	—	—	—	2
9	—	1	—	—	—	—	—	—	—	—	—	—	1
10	2	—	—	—	—	—	—	—	—	—	—	—	2
11	—	—	1	1	—	—	—	—	—	—	—	—	2
12	2	—	—	2	—	—	1	—	—	—	—	—	5
13	—	2	1	—	—	—	1	—	—	—	—	—	4
14	—	1	—	—	—	—	1	—	1	—	—	—	3
15	—	1	3	—	—	—	—	—	—	—	—	—	4
16	1	1	1	—	—	—	1	1	—	—	—	—	5
17	—	1	1	3	—	—	3	2	—	—	—	—	10
18	1	1	2	—	—	—	2	—	—	—	—	—	6
19	1	—	1	—	—	—	3	2	—	—	—	—	7
20—25	1	2	13	5	—	—	13	14	—	—	1	—	49
25—30	3	—	8	6	1	1	19	12	—	1	—	—	51
30—40	—	1	5	4	—	—	14	21	—	—	—	—	45
Over 40	—	1	4	2	—	—	—	6	—	—	—	—	13
Totals	13	12	42	23	1	1	57	59	1	1	1	—	211

TABLE VI.

AGES OF CASES UNDER SUPERVISION AT HOME.

Ages— Years	Idiots		Imbeciles		Moral Defectives		Feeble- minded		Post- encephalitic Deterioration		Unclassified or Not Examined		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
5	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2
6	.....	.....	2	.....	.....	.....	1	.....	.....	.....	1	.....	4
8	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2
9	.....	.....	4	1	.....	.....	.....	.....	.....	1	.....	.....	6
10	1	.....	3	4	.....	.....	1	2	.....	.....	.....	.....	11
11	1	.....	1	3	.....	.....	2	1	.....	.....	.....	.....	8
12	.....	1	1	2	.....	.....	2	3	.....	.....	.....	.....	9
13	.....	.....	3	2	.....	.....	3	2	.....	.....	.....	.....	10
14	2	.....	3	5	.....	.....	4	1	.....	.....	.....	.....	15
15	.....	.....	7	3	.....	.....	10	4	.....	.....	.....	.....	24
16	.....	1	2	2	.....	.....	8	7	.....	.....	.....	.....	20
17	1	.....	4	.....	.....	.....	5	5	.....	.....	.....	.....	15
18	1	.....	2	2	.....	.....	8	6	.....	.....	.....	.....	19
19	2	.....	4	3	.....	.....	9	5	.....	.....	.....	.....	23
20	.....	.....	2	1	.....	.....	5	7	.....	.....	.....	.....	15
20—25	1	.....	8	13	.....	.....	25	19	.....	.....	.....	.....	66
25—30	1	.....	4	6	.....	1	12	17	1	.....	.....	.....	42
30—40	.....	.....	5	10	.....	.....	12	18	.....	.....	.....	1	46
Over 40	1	.....	1	1	.....	.....	3	13	.....	.....	.....	.....	19
Totals	11	2	58	59	.....	1	110	110	1	1	3	1	357

TABLE VII.

CASES IN INSTITUTIONS OR UNDER GUARDIANSHIP.

(a) Obligatory Cases.

NAME OF INSTITUTION, Etc.	Idiots	Imbeciles	Moral Defectives	Feeble-minded	Post-encephalitic Deterioration	Unclassified	Totals
(a) Institution Cases :—							
Bestord Court Catholic Mental Welfare Home, Worcester	3	..	....	3
Brentry Colony, Westbury-on-Trym	2	..	....	2
Cardiff Public Assistance Institution, Ely, Cardiff	21	36	....	25	1	....	83
Drymma Hall, Skewen, Nr. Neath	1	....	....	1
Etloe House, Leyton, Essex	2	..	....	2
Hensol Castle Certified Institution, Nr. Pontyclun, Glam.	4	....	6	..	....	10
Hortham Colony, Bristol	1	1	25	..	....	27
House of Help, Bath	2	..	....	2
Monkton Hall Home, Jarrow-on-Tyne	1	..	....	1
Moss Side State Institution, Maghull	2	..	1	....	1	4
Mount Tabor Certified Institution, Basingstoke, Hants.	3	....	....	3
Newtown and Llanidloes Public Assistance Institution, Caersws	3	....	....	..	....	3
Pield Heath House, Hillingdon, Uxbridge	1	....	....	..	....	1
Rampton State Institution, Retford	1	8	1	....	10
Rock Hall House, Combe Down, Bath	1	....	..	....	....	1
Royal Earlswood Institution, Redhill	1	....	1	..	....	2
St. Elizabeth's Home for Epileptics, Much Hadham, Herts.	3	....	....	3
St. Joseph's Home, The Croft, Sudbury	1	....	....	1
St. Mary's Home, Painswick, Stroud, Glos.	4	....	....	4
St. Raphael's Colony for Epileptics, Barvin Park, Herts.	3	....	....	3
St. Teresa's Home, Lewisham	3	....	....	3
Seafeld House, Seaforth, Nr. Liverpool	2	..	....	2
Stoke Park Colony, Stapleton, Bristol	12	....	9	..	....	21
(b) Guardianship Cases :—							
Central Association for Mental Welfare, London	1	....	..	....	....	1
Under Guardianship of Parents	1	....	4	....	....	5
Approved Homes	1	....	....	1
Totals	21	63	2	110	2	1	199

(b) Permissive Cases.

NAME OF INSTITUTION, Etc.	Idiots	Imbeciles	Feeble-minded	Totals
Brentry Colony, Westbury-on-Trym .....	.....	1	.....	1
Cardiff Public Assistance Institution, Ely, Cardiff	2	1	2	5
Etloe House, Leyton, Essex .....	.....	.....	1	1
Hortham Colony, Bristol .....	.....	.....	1	1
Newtown and Llanidloes Public Assistance Institution, Caersws	1	1	.....	2
Royal Earlswood Institution, Redhill .....	.....	1	.....	1
Stoke Park Colony, Stapleton, Bristol .....	.....	.....	1	1
Totals	3	4	5	12

TABLE VIII.

CASES REQUIRING EARLY REMOVAL TO INSTITUTIONS OR REQUIRING ALTERNATIVE INSTITUTIONAL ACCOMMODATION AS AT 31ST DECEMBER, 1934.

	Cases at Home				Cases unsuitably placed in Institutions		Totals		
	Parents willing for removal		Parents unwilling for removal						
	M	F	M	F	M	F	M	F	Both Sexes
Idiots .....	.....	.....	9	6	5	5	14	11	25
Imbeciles .....	.....	1	30	29	8	10	38	40	78
Feeble-minded	1	.....	32	18	5	7	38	25	63
Post-encephalitic Deterioration .....	.....	.....	1	.....	1	1	2	1	3
Totals	1	1	72	53	19	23	92	77	169